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In This Issue

Samuel B. Hadden Discusses the Nonspecific Therapy of Neurosyphilis

Harold R. Merwarth and **Israel Freimann** Marshal the Practical Resources in Neurologic Therapy

Harold Hays Describes the Technic and Results of Zinc Ionization in Hay Fever Patients

Louis H. Sigler Interprets the Electrocardiogram as a Diagnostic Aid

Clinical Experience Reported by **Samuel B. Schenck**

Complete Index to Reading on pages XIII, XIV

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Nonspecific Measures in the Management of Neurosyphilis

•Samuel B. Hadden, M.D., F.A.C.P., Philadelphia, Pa.

IN recent years nonspecific treatment of syphilis has become almost synonymous with fever therapy and, while fever therapy has assumed a position of importance in the treatment of syphilis of the nervous system, yet there are other measures of almost equal value which are usually overlooked.

We are of the opinion that it is not the elevation of the temperature alone which is beneficial in the various methods of fever therapy. During any temperature elevation regardless of its method of production the circulatory rate is accelerated. As a result the rate of blood flow through the brain is increased and the process of healing promoted. This, we believe, is the only mechanism active in fevers produced by the prevention of radiation of heat. In the course of malaria or when typhoid vaccine or Coley's toxin is given intravenously there is in addition a stimulation of the reticulo-endothelial system and other mechanisms of immunity with the production of nonspecific protective antibodies. These nonspecific antibodies exert a healing effect upon existing chronic infections even after the cessation of fever. Hence the better results following malaria.

Our experience with fever therapy includes malarial inoculation, Coley's toxin and typhoid vaccine intravenously and general diathermy. At present our method of choice is malaria inoculation. Where there is definite contra-indications to malaria, however, we use typhoid vaccine intravenously but have discarded diathermy for the production of fever. With Wilson (1) in 1933 we pointed out how unnecessary the diathermy machine is to the production of fever. We showed that if the patient is prepared in a bed the same as for general diathermy in a warm room nothing else is necessary to produce a rise in the patient's body temperature. If hot water bottles are added to the bed the patient's temperature can be elevated quite rapidly. In using diathermy, wrapping the patient in blankets and rubber sheets, or employing any other method that depends upon the prevention of radiation of heat, the cooperation of the patient is necessary and few patients in a psychopathic hospital are sufficiently cooperative to make the method practical.

A very beneficial method of treatment, nonspecific in nature, that seldom is given the attention it deserves, is rest. We are frequently impressed with the remarkable improvement in patients who have been committed to mental hospitals and on rest and other nonspecific measures have developed remissions in the absence of any kind of specific treatment. Rest, alone, can apparently produce remissions in many patients with paresis and should be

advised as an important adjunct to all forms of treatment.

The late James Hendrie Lloyd (2) stated that in syphilitics whom he followed for years he never saw any form of neurosyphilis develop in a patient who had developed a severe secondary skin reaction. Like others, he felt that the skin reaction produced antibodies that protected other structures derived from the ectoderm. We are impressed by the effect of mercury inunctions in tabetic types of neurosyphilis and believe they stimulate the protective mechanism in the skin. We feel their effect in the relief of root pain is not from the mercury absorbed but rather from the skin stimulation they produce. Stimulation of the skin by ultraviolet light and general massage, we believe, is helpful in all forms of neurosyphilis.

In the tabetic especially, we attempt to improve the state of general nutrition and increase weight. Mellanby (3) has shown that vitamin A prevents the development of degenerative changes in the nervous system and we encourage all our patients to increase the amounts of vitamins A and B in their diets.

Many times we see patients in our clinic whom we feel are victims of enthusiastic therapy. They have been treated with arsenic and heavy metals to a point where anemia develops, and as all healing is dependent upon an adequate circulation of fairly normal blood, we wish to denounce those "systems of treatment" which disregard the general health of the individual and strive for a sero-negative patient at all costs, even if it be his good health. Measures to correct any existing anemia or to eradicate foci of infection must not be neglected in the management of neurosyphilis.

Recently with Martucci and McGlone (4) we have been studying a method to improve cerebral circulation. A transcerebral diathermy current has been shown to produce a definite increase in the rate of blood flow through the brain and while our experience in the treatment of general paresis by this method has been limited we feel it offers an additional nonspecific method of treatment worthy of a place in the management of this disease, especially where malaria and typhoid vaccine are contraindicated. It is safe, the cooperation of the patient is easily obtained, and hospitalization is not necessary.

In conclusion we wish to make it clear that we are not advocating that these methods supplant approved specific methods of treatment but that they simply be made adjuncts to present methods to obtain better results. We do at times question the enthusiastic specific treatment of patients without regard for their body economy. It is frequently for

(Concluded on page 10)

From the Philadelphia General Hospital and the Department of Neurology of the School of Medicine of the University of Pennsylvania.

Practical Neurologic Therapy

- Harold R. Merwarth, M.D.; Chief of Neurological Clinic, New York University; Attending Neurologist, Methodist Episcopal Hospital; Attending Neurologist, Brooklyn Hospital; Attending Neurologist, Kings County Hospital; Consulting Neurologist North Country Community Hospital; Consulting Neurologist, Nassau Hospital, Mineola; and Israel Freimann, M.D., Resident Physician, Kings County Hospital.

IN this brief paper, we shall attempt to present the practical aspects of the treatment of a few selected neurologic conditions as they are encountered in the average neurologic clinic. In a few of these there have been notable advances within the last few years. On the whole there are no more crippling diseases observed in medicine than those occurring in the neurologic and psychiatric fields. All practising physicians are familiar with chronic and relatively incurable general medical conditions in which the patient's economic sphere and his intimate social hook-ups are not necessarily endangered because of a chronic cardiac, diabetic or nephritic disorder. By contrast, a psychosis carries a double penalty. The afflicted psychotic becomes a total economic and social loss.

Running a close second to the psychoses, we find the severe organic neurologic disorders. Because of the marked external evidences of their disability, the average hemiplegic, epileptic and postencephalitic patients are no longer wanted by any general business concerns. In times of so-called prosperity, the burden of this type of chronic illness carried with it a tremendous emotional strain. The long existing financial depression has magnified considerably anxiety associated with chronic illness. In this type of situation, any therapeutic measure capable of reducing the emotional bombardment is welcomed by both patient and physician. As yet, medicine has no adequate substitute for the loss of a position, or the fear of a loss of economic security. However, we can assist the patient to tide over these anxieties and fears by the use of sedatives, while we in some measure try to help the chronic condition for which our aid is being solicited.

THE NEURALGIAS

Trifacial Neuralgia

Medical treatment of this condition is generally quite unsatisfactory. However, there are various medications worth trying before resorting to surgery. If the condition should be due to syphilis, antiluetic therapy is indicated before more serious measures are considered. In every instance, a careful examination should be made, of course, to rule out pain in the territory of the fifth nerve due to causes other than that of a tic, such as possible metastatic malignancy. In the very elderly patient, the administration of tincture of gelsemium is fre-

quently efficacious. We have obtained satisfactory results by combining it with potassium iodide and phenobarbital, as follows:

Tinct. Gelsemium—min. 15
Potass. Iodide—gr. 10
Phenobarbital—gr. $\frac{1}{2}$

q.s. aqua one dram, administered q. 4 h. The relief obtained through its use is sometimes quite spectacular. Trichlorethylene (1) is also recommended. This drug possesses the peculiar property of imparting anesthesia to the trigeminal nerve. It is administered in the same fashion as ampoules of amyl nitrite, the patient breaking one or two ampoules on a piece of gauze and inhaling it through the nose, while lying down, as it is apt to be accompanied by disagreeable vertigo. The relief obtained through its use is not universal. It should be tried. Diathermia (2) directed to the region of the Gasserian ganglion has been urged as a form of therapy, and if medical measures are not successful, it undoubtedly should be tried before resorting to surgery. Roentgen ray (3) therapy has given good results in a fair series of cases. It certainly offers a possible method of treating the very elderly who are potentially bad surgical risks. Alcohol injections which can be administered to ambulatory patients, when administered through proper technique, undoubtedly provide relief for a variable period, which may extend from nine months to two years. The pain invariably recurs and a new injection must be attempted.

We feel that no benefit is obtained from the free use of salicylates in this condition. The use of narcotics, such as morphine and codein, is naturally contra-indicated, because of the great danger of narcotic addiction. If all the above measures fail, the patient may be admitted to a neurosurgical clinic for section of the posterior root.

Atypical Facial Neuralgias

These patients often are baffling problems. Even extensive surgery of the sympathetic nervous system, root sections, etc., accomplish little. In view of the success found in the following instance, we recommend the use of ergotamine tartrate.

Mr. W. S., age 52, (P.P.) was referred to me because of a dull burning pain afflicting the supraorbital region and extending back over the right side of the scalp to the right ear. It was very difficult to describe. Pain

never occurred on the opposite half of the face or head. It had ceased, apparently spontaneously, on two occasions in the past five years. It had existed almost continuously for three years when I first saw him. The general neurological examination was entirely negative. He had had intensive treatment of the nasal sinuses, teeth, etc., without relief. Phenobarbital alone gave no relief. Pain seemed less when the tincture of gelsemium was prescribed. It was not until ergotamine tartrate was added to the above that the pain ceased entirely. He was discharged with the advice to use a tablet containing 0.001 gm. ergotamine tartrate once daily. There was no return of the pain in six months.

Headache—including Migraine

It is recognized that a headache is only an expression of abnormal physiology, local or systemic, organic or functional; and that in itself it may be disabling, requiring relief until the causative factors are removed. The basic factor is often never discovered.

The functional states, with high tension, are the chief provocative factors.

Dr. H. L., age 34, a victim of crippling headaches, admitting the high tension under which he lived, obtained relief simply by taking phenobarbital (gr. $\frac{1}{2}$) in the morning on arising. A reinforced barbiturate, magnesium phenobarbital 0.7 grams plus phenacetin 2.5 grams, acts even more effectively.

In many instances the complaint is not a headache, but so far as the patient is concerned, the pain is just as bad as a headache and should be treated as such. In such cases, the administration of a sedative regularly throughout the day may be helpful.

The classical migraine attack can be helped in most instances with ergotamine tartrate. It may be debated exactly in what specialty the case of migraine lies. Many are the remedies suggested, but no remedy hitherto proposed has had the uniform success of ergotamine in relieving the pain. The response is sometimes dramatic.

Dr. H. R., age 40, an unwise eater, a probable victim of allergic migraine headache, had four bouts of prostrating cephalgia within six months. He was brought to my attention because of a bradycardia, vomiting, and an agonizing cranial pain not relieved by morph. sulph. gr. $\frac{1}{2}$. The administration in a period of one-half hour of ergotamine tartrate 0.001 gram (repeated) gave him prompt and effective relief. Prior to the use of this substance, no therapeutic remedy of any type had any effect on the pain. For the relief of a migraine seizure very little success has attended the administration of ergotamine tartrate by mouth.

Multiple Sclerosis

Therapeutic suggestions in this condition are legion. Their very number implies doubt as to their efficacy. In any illness characterized by spontaneous remission, irrespective of treatment, the proper evaluation of any type of therapy is difficult. At the present time, a wave of fever therapy is dominating the treatment of a wide variety of neurologic states, because of the undoubtedly success found in treating general paralysis of the insane with malaria, and the good results found in the vaccine treatment of Sydenham's chorea. However, in the application of heat to multiple sclerosis, we feel very skeptical as to any real therapeutic benefit, although this point is still debatable. It is well known that exacerbations of this disease may be brought about by acute infections of any type and unusual physical exhaustion, which may

well be induced by the use of artificial heat. Of all the measures we have used, the arsenicals seem to produce the best results. Sodium cacodylate gr. 1 $\frac{1}{2}$ by hypo., three times a week, has proven distinctly beneficial. The use of neosalvarsan and silver salvarsan has given good results in the hands of others. We are not at all persuaded as to the ultimate value of quinine therapy, although we are not prepared to discard its use. Liver extract has been recommended and, in some instances, apparently causes a distinct improvement. Diathermia has been advocated in those cases in which a distinct sensory level can be disclosed. Deep x-ray therapy has been advocated also. Wetherall advocates cervical sympathectomy as a hope of improving the spinal circulation, which he feels is defective in late cases, where other measures have failed. We have used the reinforced barbiturate and phenacetin above referred to in these cases; and it seemed to have an alleviating effect in those cases where the subjective sensory disturbances were particularly annoying.

Subacute Combined Sclerosis

The treatment of this condition is that of pernicious anemia. In general, it might be said that where marked spinal cord symptoms exist, the blood picture of the patient should be ignored and the symptoms treated. Liver extract, by mouth, can be used very freely. In our hands ventriculin, particularly in resistant spinal cord cases, has yielded good results. In such cases the objective findings show virtually no improvement whatsoever. Despite the lack of sensory and reflex change in response to treatment, there may be considerable improvement in the capacity of the patient to adjust himself to performance of daily functions. At the present time hypodermics of liver intramuscularly, administered in its more refined and concentrated form, induces fairly rapid response. The administration of hydrochloric acid should be continued. Vitamin B should be administered in every case of pernicious anemia of this type. A mild subjective relief is obtained in these cases by the use of salicylates and sedatives. A combined reinforced barbiturate mildly alleviates the sensory symptoms.

Myasthenia Gravis

Recently, numerous measures have been added to the treatment of this disorder. Formerly, large doses of strychnine, gradually stepped up to gr. $\frac{1}{4}$ t.i.d. by hypo., offered our only hope of therapy (4). Ephedrine sulphate gr. $\frac{1}{8}$ five or six times daily is very successful in inducing a remission. We say this advisedly because this disease is also characterized by spontaneous improvement. There is no doubt, however, that the disease is benefited by the use of this excitor to the sympathetic nervous system, with or without aminoacetic acid (5). Smaller doses used more frequently are much more effective than larger doses at wider intervals. Glycine, or aminoacetic acid, in the form of six doses of five grams each daily, has been reported as helping some cases. Physostigmine salicylate, gr. 1/60 by hypo., as an antagonist to hypothetical toxic curare-like substance (acting on and depre-

sing the nerve-muscle terminal), definitely improves the sense of fatigue in some of these patients. It undoubtedly is quite useful as a means of restoring the tiring muscles of respiration.

Mr. W. K., B. H., No. 53968, age 42, a sufferer for five years with many remissions, has been treated at various times with strychnine, glycine, ephedrine, etc. Of all the medications used in this case, ephedrine seemed to produce the best results. Recently, physostigmine gr. 1/100 by hypo. q. 4 h. definitely improved the quality of this patient's voice, the strength of the ocular muscles and his capacity to get about. Respiratory difficulties, frequently of a very distressing nature, were relieved by its use. Very recently, potassium chloride five to six grams six times daily has been urged as a means of intensifying the action of the physostigmine. There has not been success with this method in one case in our hands (Mr. W. K.).

Chronic Encephalitis

This scourge of the twentieth century is distinctly benefited by the various cousins of the belladonna group, for instance, hyoscyamine hydrobromide gr. 1/100, which in higher dosages from twice daily to q. 3h. by mouth is perhaps as successful in ameliorating the various complications of this disease as any member of the group. It is frequently necessary to substitute another type at some time or other. Tincture of stramonium likewise relieves symptoms, having the advantage of being administered in the form of "drops" which can be increased or decreased at will by the patient. It seems essential that the drugs used in this disorder be varied. It is characteristic that these patients tolerate huge doses of this medication. As I have quoted elsewhere, (6) one of my patients on his own volition took 200 min. Tinc. of Stramonium t.i.d. in addition to hyoscyamine hydrobromide gr. 1/100 b.i.d. Recently, we have been using atropine, in a few of these cases. The dosage begins with $\frac{1}{2}$ mgm., gradually increasing till six to twenty mgm. are given daily. There is a general improvement in the symptomatology of the patient. The patient's mental condition improves and there is distinct lessening of muscular tension. It should be emphasized that small doses of the belladonna group are most often valueless in the treatment of this disorder. Frequently no real benefit is noted until the near toxic dose is approached. Alternating the various members is sometimes helpful. The myasthenic symptoms in these cases can best be treated with ephedrine sulphate in small doses of gr. $\frac{1}{8}$ at fairly frequent intervals. Occasionally, we find that this is the only drug which seems to assist these patients. In some cases, the addition of a sedative is necessary as an adjuvant in therapy. Symptoms of chronic encephalitis vary considerably. In some cases, there is considerable anxiety and apprehension. The use of reinforced barbiturates in some of these cases greatly improved the picture. It might, however, be well to add that in some instances sedatives had too great a depressing effect on the patient.

Polyneuritis

In the treatment of this crippling illness, it is of the utmost practical importance to ascertain the precise causative factor in order that conditions directly or indirectly responsible for the neuritis can be corrected. Two familiar examples are the re-

lation of alcohol to alcoholic neuritis and the relation of the occupation of painting to lead neuritis.

If due to causes which can be attacked directly as in arsenical neuritis, sodium thiosulphate can be administered to eliminate the drug from the system. In many instances, we never know or simply guess as to the cause. Recently, it has been determined that a dietary deficiency is responsible for the preparation of the body soil so that other toxic factors, notably alcohol, can attack the nervous system. Consequently, in every case of neuritis from any cause, attention must be paid to the diet with special emphasis on the vitamin phase (vitamin B). Where hydrochloric acid is absent or diminished its use is suggested. The injection of strychnine hydrochloride, grains 1-15 b.i.d., has been advocated as having a definite influence on the course of the disease.

Most patients should be put to bed, not only because of muscular weakness, but because of frequent involvement of the heart. Pressure of the bed clothes on the feet should be removed by the use of a cradle, in order to prevent foot-drop. Padded splints may be necessary to keep the foot at right angles. In every case of neuritis we must be on the alert to prevent contractures, which are liable to develop at the hip and knee joints. Their development may be circumvented through the daily passive manipulation of the knee and hip joints, which measure, despite the presence of tenderness, can be carried out with relatively little discomfort, if the manipulations are slowly performed. Mild massage should be urged as soon as most of the tenderness has disappeared. If the possibility of a contracted joint is not considered, its relief may prove to be the really knotty problem in the course of a neuritis. If, despite every precaution, contractures still develop, traction should be applied to the lower leg.

The relief of pain in the extremities as a result of polyneuritis may be a difficult problem to handle. Every effort should be made to avoid the use of morphine or codeine, particularly in the alcoholic addict where it has already been proven that addiction or a habit tendency can easily develop. Occasionally they must be prescribed. Acetylsalicylic acid or phenacetin in regular doses may be often sufficient to provide a certain degree of physical comfort. Phenobarbital or a bromide will ease the restlessness in many cases. The combination of phenobarbital and phenacetin may be used with considerable success.

One striking case of a prolonged attack of polyneuritis with vague pains in the lower extremities unusually resistant to therapy was improved in a surprising degree through the administration of ergotamine tartrate, bellafoline, and phenobarbital. He was able to leave the ward where he had been confined for many months.

Neuroses and Psychoneuroses

In no group is the use of sedatives so indispensable as in the so-called neuroses. What physician by the use of pure suggestion—or its more elaborate form, psychoanalysis—can hope to stem the flood of symptoms caused by an emotional Niagara, precipitated by the sudden loss of a ten

thousand dollar a year job? The use of sedatives in such a case is well nigh mandatory.

If the average nerve clinic were suddenly deprived of all forms of sedatives, it would be virtually impossible for the physician in charge to maintain prolonged contact with the patient. The clinic in this sense would exist only for the purpose of diagnosis. The number of partially remedial agents in neurology is quite limited. Even in those instances where a medication is able to provide a certain degree of relief, sedation in some form is often necessary, as a supplement.

There are many arguments pro and con as to the relative advantages of certain barbiturates, because of specific substituted radicals. This question does not concern us here. Recently we have been impressed with the value of a reinforced barbiturate. Our attention was directed to it through the work of Gilman and Barbour (7), who have shown by animal experiments that the addition of phenacetin to phenobarbital definitely lessens the toxic effects of the barbiturate as used singly, while at the same time it does not diminish the activity of the phenobarbital. We have used magnesium phenobarbital 0.7 grains* in combination with acetphenetidin 2.5 grains in many diverse types of organic and functional neurologic disorders, where a sedative has seemed necessary. The above combination has been used particularly when the medication recognized as having a remedial quality has not had its full desired or expected effect, and the morale of the patient has required boosting, as in the use of hyoscine hydrobromide in encephalitis. In a series of 62 cases, we have carefully compared the relative merits of sodium *v.* magnesium phenobarbital and have found virtually no difference in the clinical therapeutic effect.

It is a common observation that when pure phenobarbital is used for a fairly long period, or in susceptible individuals, there frequently results a heavy dazed feeling, a so-called "hang-over", after its use. However, when in the combined form, as mentioned above, the ill effects seem to be distinctly absent, while the soothing sedative effect is retained.

The reinforced barbiturate, magnesium phenobarbital plus phenacetin, has been used in 52 cases. In the combined use in convulsive states, there has been no increase in the number of attacks, while the patient seems definitely brighter. It also has a slight analgesic effect, as is quite evident in the following instance.

Mr. B. P., K. C. H., No. C24236, suffering from acute rheumatic fever, was admitted by error to the neurologic division, because of painful extremities. Relief of pain was obtained after the administration of reinforced barbiturates. Naturally, as soon as the real condition was recognized, salicylates in pure form were used.

Also, in a case of hypertrophic spondylitis, Mrs. A. B., age 62, B. H., No. 111602, who suffered from pains of a radicular character, considerable subjective relief was produced after administration of this combination. There were other additional (emotional) factors in her problem, which were alleviated by sedation.

* Calculated in terms of real phenobarbital, 0.7 grain magnesium phenobarbital is equivalent to about $\frac{1}{2}$ grain or slightly more of sodium phenobarbital.

In the hopeless chronic cases, where there is no hope of any real benefit from any type of therapeutic agent, and where the patient should be observed by a physician, a placebo naturally is quite futile. In many such hopeless chronic cases, the emotional anxiety can be lessened by judicious use of carefully prescribed sedatives.

For example, in the case of Mrs. E. B., age 53, B. H. No. 157937, a victim of degenerative chorea (Huntington's familial type), whose sister is a victim of the disorder and has been confined to a State institution for a number of years, the reinforced medication helped materially. It seemed to reduce somewhat the attention she paid to her rather conspicuous movements and lessened the fear of future institutional care. Although no therapeutic cure is expected in situations like this, a physician is warranted in giving any help that will tide over the distressing situation. In this case tincture of hyoscyamus aided somewhat in reducing the involuntary movements, without, however, providing a psychic up-lift.

In attempting to evaluate the benefit of any medication on purely objective grounds, the personality factor must be considered. By this, I mean the relationship existing between the doctor and his patient. There is no doubt that the simple "laying on of hands" or the actual writing of a prescription, regardless of its content, carries a tremendous power of suggestion, when the patient has full confidence in the physician. A full benefit can be measured more accurately in situations where, because of a large number of patients, a great deal of time cannot be given to each patient to make the relationship more than an impersonal one, and where the doctor is forced to be much more interested in the disease than the individual patient. This situation has obtained in our clinical observations reported above.

SUMMARY

Certain aspects of practical neurologic therapy are discussed, particularly in the neuralgias, headache, migraine, multiple sclerosis, combined sclerosis, myasthenia gravis, and chronic epidemic encephalitis. The use of various remedial agents, stramonium, hyoscyamus, ephedrine, trichorethylene, aminoacetic acid, physostigmine, and ergotamine, is described. The importance of sedation is emphasized. Reinforcement of phenobarbital by phenacetin is recommended, as providing excellent sedation. After effects, such as "dazed" feeling, are found to be notably less after magnesium phenobarbital, reinforced with phenacetin, is used. The value of sedation in chronic organic nervous disease, and in psychoses and neuropsychoses, is noted. The importance of eliminating the personal factor in the judgment of medication results is stressed.

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30 Eighth Avenue.

Zinc Ionization (Warwick Method) in the Treatment of Hay Fever and Allied Conditions

• Harold Hays, M.D., F.A.C.S., New York, N. Y.

THE subject of hay fever is of interest to everyone, both to the laity and the medical profession. Perhaps there is no so-called disease for which so many remedies have been applied—and discarded. Specific cures, most of them seasonal, have been tried but this method of treatment has not been as satisfactory as one would desire.

Dr. Harold L. Warwick has brought ionization of the nasal mucosa, for the treatment of hay fever (including rose cold), hyperesthetic rhinitis (perennial catarrh) and certain types of asthma, forcefully to our attention and it is due to the fact that he has devised an accurate and fool-proof machine which has made it possible for us to be successful in many cases.

The ionizing of salts into various parts of the body is decidedly not a new procedure. Ionization of metals has been advocated and used for over thirty years but very inaccurately. As long as fifteen years ago, I began ionization of the middle ear for chronic suppuration, using an ordinary rheostat or two dry batteries with a hand-made electrode and a 1% zinc sulphate solution. Hollender and others have tried ionization of the nasal mucosa for hay fever and other conditions for well over ten years with very encouraging results. But I wish to repeat that no universal usage of this method of treatment was made until Warwick devised a machine which was fool-proof and could do no damage to the tissues.

Ionization means the penetration of metallic salts into the tissues by the use of a mild galvanic current. It is well known that a chemical change takes place which may even go so far as to act as an alterative in the body. That this is true was proved by Hollender, who used over 100 control patients on whom an application of the metal was made but no electric current used. The end result was negative in all cases, but, when the same solution was ionized into the tissues, definite tissue changes could be seen.

At this point let me summarize some of the results of other workers in this field; for their reports and mine tell the story up to the present time.

In May, 1935, Warwick reported that he had treated 225 cases, giving 274 treatments (some repeats). Out of this number he had 209 cures and 16 failures. Some of these are cases of several years' standing without a recurrence of symptoms.

Hollender, of Chicago, uses a zinc electrode with a simple apparatus. In his table of results he presents 32 cases, mostly allergic rhinitis, in which there are 13 which might be considered cures.

Presented before the Congress of the Pan-American Medical Association, at Sea, on S. S. Queen of Bermuda, July 11th, 1935.

Other patients showed improvement. Many of them had associated food allergies. He has also treated a number of cases of hay fever with fairly gratifying results.

Franklin (Great Britain) in 1931 and 1932 reported 71 cases of hay fever. Of these 54 had no further attacks, 6 were failures and 11 failed to report. The majority of cases received more than one treatment. Both Hollender and Franklin agree that intranasal zinc ionization is "more beneficial in vasomotor rhinitis than in the seasonal affection."

Alden, of St. Louis, states that he treated 19 cases of hay fever in 1933. "The relief was spectacular." Some of the patients were children who were treated under avertin anesthesia. In 1934, he treated 41 cases whose ages ranged from 77 to 6 years. Two of the patients, aged 77 and 72 years, had had hay fever for over 30 years and were completely relieved after one treatment. The majority of his cases were treated before the hay fever season. Although many men believe in treating the patient during the attack, thinking that better results are thus obtained, I am in agreement with Alden that the treatment is less severe when given in the interim at a time when the mucosa is less turgescent and less sensitive. Alden states that of the 41 cases, 15 showed definite symptoms after treatment. Six did not report; the remainder were comfortable. Some of these were reionized, so that he can claim 32 patients relieved or cured out of 41 cases treated.

Haseltine of Chicago also reports a number of satisfying cases. He claims that this method of treatment is a valuable addition to our armamentarium for treating allergic conditions, including some forms of asthma.

A description of the Warwick machine and the method of procedure in treatment may be found in an earlier treatise of mine and in the published reports of Warwick. However, there are a number of points in the treatment that are worth while bringing to one's notice.

Ionization treatment of the nasal mucosa is a hospital procedure. In the beginning I treated a number of patients in my office but I found it decidedly unsatisfactory. Considerable apparatus is necessary, the time element is of importance (the treatment takes forty minutes to one hour), and assistance is required. Of more importance is the fact that the majority of patients are apprehensive and are decidedly uncomfortable for the first twenty-four hours after the treatment.

The patient presents himself at the hospital at least one hour before the treatment is given and is immediately put to bed and given 3 grains of sodium amyta. He is wheeled to the treatment room, where he is placed on the operating table in an almost upright position.

The second point of importance is the proper toilet of the nose. The nasal mucosa is cleaned and sprayed with a 2% cocaine solution, containing a few drops of adrenalin. Then both sides of the nose are packed with strips of cotton, saturated with the same solution, the packing being left in place for ten minutes.

The indifferent electrode, the pad placed around the arm, should have been immersed in a salt solution for at least two hours before treatment to allow a complete saturation. It is then applied firmly to either arm with a tight gauze bandage.

The cotton packing is then removed from one side of the nose. The nasal chamber is sprayed with the metallic solution (zinc, cadmium and tin) and then one proceeds to pack the nose with thin strips of fine paper gauze which have been thoroughly saturated in the metallic solution. Care must be taken that the lower and first packing, in the inferior meatus, reaches back to the nasopharynx. On top of the lower packing is placed the electrode and, on top and around this, further packing is inserted until all of the nasal mucosa is contacted, from above the middle turbinates to the floor of the nose. The packing has a tendency to dry, so it may be wise to saturate the posterior and upper packing with the metallic solution by means of a medicine dropper.

After the nasal cavity is packed, the electrodes are attached and a reading made on the ohmmeter. This is of the utmost importance; for according to Warwick, the reading must be between 2500 and 3000 units. Any reading above that means a dissipation of the current which will result in incomplete ionization. As a rule the reading can be brought down by more complete saturation of the nose or by tightening the arm band. It may be necessary to repack the nose. Sometimes if a mild current is turned on for a few moments and then shut off one will find that the ohmmeter reading is lower.

When everything is set properly, the current is turned on and the ammeter reading gradually increased until one obtains ten milliamperes of current. The time clock is then set for ten minutes. Automatically, at the end of that time, the clock turns off the current.

When the packing is removed, one finds that the entire mucosa of the nose is covered with a grayish membrane. Now the cotton is removed from the other side of the nose and the same procedure resorted to.

The majority of patients are not greatly distressed by this treatment. Their first complaint is of a salty taste in the mouth with increase in salivation. Some others complain of lacrimation. Others, whose membranes are extremely sensitive, will have sneezing attacks during the treatment.

As soon as the patient is placed in bed he is given a hypodermic injection of a quarter of a grain of morphine. At night, he is given another dose of sodium amyta. Everything is done to make the patient comfortable. He leaves the hospital the next morning. He is observed carefully during the following week and is cautioned not to blow his nose.

Within twelve hours a gelatinous membrane forms which is an exfoliation of the superficial epithelium. This membrane must, under no circumstances, be forcibly blown from the nose, else the mucosa may be injured and bleeding take place. The patients sometimes complain of the nasal blockage but they do not sneeze so they are satisfied. No sprays should be used. A yellow oxide ointment may be applied to the nostrils. Drops may be used in the eyes if there is any irritation. At the end of one week the mucosa is clean and looks healthy in every particular. That no permanent harm is done is attested to by the microscopical examination of tissue removed from the nasal cavities at varying intervals after ionization. In no instance was there any change. Apparently the real change is biochemical in nature.

Of course one is more interested in results than anything else. I have treated forty cases (which is only sufficient for a preliminary report), the last thirty of which were treated in the Park West Hospital. An analysis of these cases follows:

15 cases of hay fever (spring and fall variety), 12 improved or cured, 3 failures.

11 cases of hyperesthetic rhinitis, 10 cured, one failure.

4 miscellaneous cases, two of which suffered from asthma. The asthma cases were both failures.

I cannot account for the failure in the three hay fever cases. They are to be reionized again this year. One cured case had asthmatic symptoms and was allergic to certain foods. His asthma disappeared and he has been placed on a generous diet with no untoward results.

The hyperesthetic rhinitis case which is reported as a failure may be accounted for by the fact that she later developed an angioneurotic edema, so that her symptoms were mainly due to an endocrine disturbance.

I do not definitely advocate this treatment for asthma. But there are certain types of asthma, unrelated to sinus disease, which are nasal in origin. The future will tell whether such cases can be helped or not.

Although we are satisfied that zinc ionization of the nasal mucosa is worthy of trial, it should be understood that no definite endorsement of the treatment should be given until one has a record of cases extending over a number of years. We are inclined to feel that no promise should be made in any case and that each case should be carefully recorded so that notations may be made from year to year.

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133 East 58th Street.

The Electrocardiogram As an Aid in Diagnosis

• Louis H. Sigler, M.D., Brooklyn, N. Y.

THE purpose of this paper is to point out to the general practitioner what he is to expect from the electrocardiogram as an aid in his diagnosis. I feel that this subject is timely, judging from misconceptions the average physician has as to the relative value of this laboratory procedure.

To start with, it might be in order to give a short explanation of what the electrocardiogram tells us and to show the importance of proper preparation and interpretation of the tracing.

The electrocardiogram records only the electrical events of the heart accompanying the process of contraction. It does not tell us anything about the force of cardiac contraction or the functional ability of the heart to do work. As a recorder of electrical events it is the resultant of the differences in potential occurring at any moment in the conduction apparatus and the ultimate innumerable muscle fibers composing the heart. The algebraic summation of these fractional potential differences is what gives us the picture.

What the electrocardiogram shows are electro-motive force, direction and time relationship of the summated current. For these to be normal, there must be normal structural integrity of the composite conduction apparatus as well as a certain directional layout of the network along which the current is propagated. In all normal hearts the pattern of this layout is so uniform that we can tell at a glance from the resultant electrocardiogram that it comes from a normal heart. There may be minor variations in the network arrangement in various normal hearts resulting in some variations in the normal electrocardiogram in different individuals. At times the variation may be so marked as to appear abnormal yet belong to a normal heart.

In addition to the anatomic pattern, the position of the heart in the chest cavity determines to a great extent the electrical direction of the composite electrocardiogram. This factor is likewise somewhat variable in all healthy individuals and becomes more so in diseased states of the heart and of the surrounding organs and structures. Three other factors may modify the electrocardiogram in health and more so in disease: the ionic composition and the glycogen content of the heart muscle; the vagal and sympathetic influences playing upon the heart; and the state of the body tissues, particularly the skin, through which the current must pass to be carried off by the electrodes to the electrocardiograph to be photographed. The importance of the last factor will be appreciated when we realize that in the human body we can not carry on the electric current produced in the heart directly from the heart but through the intermediation of the body tissues by indirect leads. The body tissues in various individuals offer various resistances to the flow of the heart current and shunting is marked. This is seen especially in some constitutional disturbances, as, for example, in myxedema. Besides, many tis-

sues in the body such as somatic muscles elaborate currents of their own which may be superimposed upon the electrocardiogram. Unless these factors are borne in mind and great care is taken in the preparation of the electrocardiogram abnormalities may occur which may be misinterpreted. Likewise, polarization at the site of the electrode contacts with the skin as well as extrinsic currents, static and induced, and those caused by bad contacts in the extrinsic portions of the circuit, and string resistance may modify the electrocardiogram and make it appear abnormal even though obtained from a normal heart.

Assuming that great care is exercised in preparing the tracing and that it is properly read and interpreted, what diagnostic aid may we expect from the electrocardiogram?

The electrocardiogram will in many instances give us the first indications of abnormalities of the heart in the course of any acute infectious disease, as shown by Burnett and Piltz (1), Dressler and Kiss (2), Lukowski (3) and repeatedly observed by the writer. These changes may occur long before any physical signs of myocardial disease are present. It thus helps to detect incipient and at times abortive cardiac involvement in the course of acute infectious states and is a valuable guide in the proper management of the case. This is true if a previous tracing was normal or if repeated tracings show rapid significant changes.

In the course of acute rheumatic fever the electrocardiogram may at times be the only means of detecting early cardiac involvement. The incidence of clinical evidence of cardiac involvement in acute rheumatic fever is far less than electrocardiographic evidence. The progress of myocardial involvement in the disease may likewise be followed by the electrocardiogram. Occasionally, a case may appear to be quiescent as evidenced by temperature reaction, blood cell sedimentation time and white blood cell count, yet the electrocardiogram may continue to show progressive changes indicative of activity. It is important to remember, however, that abnormalities in the electrocardiogram resulting from acute rheumatic carditis may remain permanent, as shown by Shapiro (4), Levy and Turner (5), and others. Hence, a single abnormal electrocardiogram does not necessarily indicate active myocardial involvement. Only frequent changes in the configuration of the tracing will indicate activity. It must also be remembered that many patients who recover from acute carditis with or without valvular damage or acute cases where the inflammation is confined mainly to the valves or pericardium may show normal electrocardiograms. The importance of correlating clinical and electrocardiographic evidence in arriving at our diagnosis is thus seen.

In acute coronary occlusion the electrocardiogram will often prove indispensable. This is especially true where the condition simulates an acute sur-

gical abdomen or where the symptoms are not clean-cut. In cases of coronary occlusion we must again bear in mind the frequent absence of typical electrocardiographic evidence of the condition and of the occasional presence of electrocardiographic changes of acute occlusion in conditions other than thrombotic occlusion of coronary vessels. Thus the coronary occlusion picture has been found in such conditions as stab wound of the left ventricle by Bates and Tallay (6); in massive pericardial effusion by Scott, Feil and Katz (7); and by Scherf (8); in rheumatic carditis by Cohen and Swift (9); in angina pectoris by Feil and Segal (10); Parkinson and Bedford (11); Wood, Wolfert and Leverzey (12); and in severe anoxemia by Katz and Hamburger (13) and others. Either local destruction of heart tissue or local anoxemia is what gives us the picture. Whatever causes the anoxemia, whether a thrombotic, embolic or endarteritic closure of a vessel or compression of a vessel from without, as may occur in pericardial effusion, Aschoff body infiltration near a vessel, periarteritis nodosa or coronary spasm, the resulting electrocardiogram may be the same. Hence, although the electrocardiogram will give us data as to the myocardial condition in these cases, the entire clinical picture must be correlated with such findings for a final diagnosis. In this respect this laboratory method is similar to a blood count or blood cell sedimentation time. An increase in the white cell count or a rapid sedimentation time indicates an infectious or actively destructive process going on in the body, but these data must be correlated with clinical findings to arrive at a diagnosis as to the kind of disease that is producing such changes. More than a blood count, it will frequently give us the final diagnosis in a doubtful case. For example, the writer recently saw a woman, 65 years old, who suddenly developed severe pain in the left kidney region, radiating to the left anterior abdomen and urinary bladder. The pain was associated with shock, frequent urination and some drowsiness and restlessness. The following day the pain was experienced mainly in the epigastrium and there was elevation in temperature, congestion of the bases of both lungs, and considerable upper abdominal tenderness and rigidity. Drowsiness and restlessness persisted. The blood urea nitrogen was 30 milligrams per 100 cc. of blood. The possible diagnoses were obstructive nephrolithiasis and secondary early uremic manifestations; mild acute pancreatitis; possible small perforation of a viscus; or acute coronary occlusion with predominant abdominal symptoms. In favor of the latter was definite splitting and diminution in intensity of the first heart sound, congestion at the bases of the lungs, and the temperature reaction in addition to the shock and fall in blood pressure. It can be readily seen, however, that all these symptoms may go with one or more of the other conditions, especially in the presence of general arteriosclerosis and previous hypertension which she presented. An electrocardiogram showed typical changes that go with acute coronary occlusion. The subsequent course and further electrocardiographic changes proved the diagnosis.

Numerous similar cases may be cited where the

electrocardiogram saved the patient from unnecessary and dangerous operative interference. On the other hand, many other instances have been observed by the writer and others where the electrocardiogram helped to rule out coronary occlusion and operative interference in a case of ruptured viscus saved the life of the patient.

In the course of coronary disease without any occlusive episodes, the electrocardiogram will often but not always be of help in our diagnosis. Many cases that show definite electrocardiographic evidence of the disease will also show sufficient clinical evidence to make a diagnosis. Many other cases will show neither clinical nor electrocardiographic evidence of the condition and we must rely in those cases on the subjective symptomatology, with its great variability, for a possible diagnosis. In some cases, the electrocardiogram may be the only means of diagnosis. In a great many cases, repeated electrocardiograms taken at intervals of six months to a year may show changes which will throw light on the structural alterations in the heart muscle incident to slow, progressive coronary changes. It will thus help us in arriving at a definite diagnosis in many doubtful cases.

The importance of knowing the clinical history of the patient in interpreting an electrocardiogram cannot be over-estimated. Abnormal conditions extrinsic but adjacent to the heart may modify the electrocardiogram to such an extent as to make it look decidedly abnormal, and erroneous diagnosis of heart disease may be made unless we know the clinical facts. For example, artificial pneumothorax has been shown to produce changes in the electrocardiogram by Master (14), Pervin and Dronet (15), Hansen and King (16) and others. It is important to realize, however, that although these changes might be due to alterations in the position of the heart, they are undoubtedly due to some extent also to a greater burden thrown on the heart by constriction of the pulmonary artery circulation. Dubrow (17) has produced definite anatomic cardiac changes experimentally by prolonged artificial pneumothorax, corresponding to electrocardiographic changes observed. The effect of sudden increase in intracardiac pressure upon the electrocardiogram was also shown experimentally by Otto (18).

There is no doubt that all extrinsic factors producing electrocardiographic changes may in the course of time, if prolonged, produce anatomic changes. The electrocardiogram may therefore be considered to present the first indication of cardiac damage, be the damage permanent or temporary, clinically tangible or intangible.

The extent of the sensitivity of the electrocardiogram in detecting changes in the cardiac condition due to noxious stimulation is evident from the effects of heat or cold, various drugs and constitutional states upon the heart. Heat and cold applied to the heart experimentally by Smith (19) produced alterations in the electrocardiogram. Drinking ice water was shown by Wilson and Finch (20) to produce some alterations. Drugs, such as quinidine and digitalis bodies, have long been known to produce profound effects upon the electrocardiogram. Nitrous oxide anesthesia was shown by Ward and Wright

(21) to be accompanied by electrocardiographic changes. Green and Rosenbaum (22) found changes in the electrocardiogram under intravenous methylene blue injection, and Lev, Walter and Hamburger (23) under ergotamine therapy. Calvin (24) reported changes induced by gasoline poisoning. Salischoff and Tscharnogoroff (25) found changes from the use of tobacco. Sigler and Schneider (26) have recently observed a case of electric shock showing progressive electrocardiographic changes without clinical evidence of anatomic cardiac disease. Wolf, White and Parkinson (27) reported several cases that looked like bundle branch block in apparently healthy individuals. The present writer (28) reported a similar case as well as an unusual case which returned to normal mechanism by reflex vagal effect. In all such cases there must be a temporary disturbance in the electrical condition depending probably on disturbance in the ionic condition or glycogen content of the heart muscle, or on nervous influences, not on actual anatomic damage of the muscle tissue. We have, however, good reason to believe that actual anatomic damage will ultimately result if the condition or the noxious stimulus persists for any length of time. The electrocardiogram is, therefore, the first indicator of abnormality in such cases, and may be considered to be a preclinical means of cardiac diagnosis.

In the differential diagnosis of the various forms of cardiac arrhythmias, we often have to resort to the electrocardiogram for help. The very knowledge of most of the arrhythmias is to be credited to this means of diagnosis.

To Summarize — The electrocardiogram is of great help in detecting preclinical damage of the heart. It is indispensable in the differential diagnosis of cases of coronary occlusion which simulate surgical conditions of the abdomen or which present atypical symptoms. It may be the first means of detecting incipient cardiac disease in the course of acute infections. In rheumatic fever it may be the only means of detecting early cardiac damage and the progression or recession of activity of cardiac involvement. In coronary disease without acute occlusive episodes it will often, but not always, help in diagnosis.

The electrocardiogram is to be considered only a laboratory method of diagnosis and must be correlated with clinical findings if significance is to be attached to it. This fact is important to bear in mind, considering the present-day tendency to make diagnosis on the basis of laboratory findings only. As a laboratory method, a full understanding of possible technical errors and a proper interpretation of the findings are imperative in order that we be not misled rather than aided in our diagnosis.

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255 Eastern Parkway.

Nonspecific Measures in the Management of Neurosyphilis

(Concluded from page 1)

gotten that the specific drugs for the treatment of syphilis are potent poisons and may be given to the point of harming the patient. It is suggested that the health of the patient be the first consideration and not his serology. Our drug of choice is tryparsamide and we believe that it gives superior results largely because of its splendid tonic effect, which may almost be regarded as a nonspecific effect. This drug has gained in popularity despite its feeble spirocheticidal action.

SUMMARY:

In addition to fever therapy other nonspecific measures of value in the management of neurosyphilis are:

1. Stimulation of the skin by massage, inunction and ultraviolet light.
2. Diet and vitamin therapy.
3. Measures which improve cerebral circulation.
4. Correction of anemia and foci of infection.
5. Tryparsamide for its tonic effect.
6. REST.

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135 South 36th Street.

American Red Cross Plan and Highway Fatalities

Because of the alarming total of road accidents in the United States each year, the American Red Cross has determined to establish highway first aid stations throughout the country. In 1934, 36,000 persons were killed on the highways and 1,255,000 were injured. With immediate first aid, many of these lives might have been saved. Already 100 stations are in operation and within the next few weeks 400 or more additional stations are to be established. In each of these stations there will be a list of the nearest local physicians and hospitals, developed by the local chapter of the Red Cross on consultation with the local medical society. The workers and attendants at the first aid stations have been instructed by the Red Cross to receive their training and supervision from local physicians. The attendants must, of course, have completed the standard course in Red Cross first aid.

Clinical Notes, Suggestions and New Instruments

Dermatitis Herpetiformis Complicating Pregnancy

• Samuel B. Schenck, M.D., F.A.C.S., Attending Gynecologist, Jewish Hospital; Instructor in Obstetrics and Gynecology, Long Island College of Medicine. Brooklyn, New York

SEVERE generalized dermatoses occasionally occur during pregnancy and are of considerable interest from several standpoints. Gellhorn (1) reports a case of dermatitis herpetiformis in which a cesarean section had to be done because of a cephalopelvic disproportion, resulting in death from peritonitis obviously caused by the infected skin through which the incision was made.

Dermatitis herpetiformis, sometimes called "prurigo gestationis," is an itchy eruption of tiny papules and vesicles, closely grouped, disappearing after delivery (DeLee, 2) (Williams, 3). DeLee (2) states that the cause is an underlying toxemia, and classifies this rash under the heading of "toxic rashes." However, none of the signs or symptoms of toxemia have been found in these cases. The blood pressure, urinalyses and other symptoms significant of a pregnancy toxemia are normal. The question arises whether there may not be an allergic factor as the causative agent in this disease, and here we are confronted with the difficulty, as stated by Sulzberger and Rosenberg (4), that the nature of the presumptive allergen is as yet unknown and skin testing is therefore impossible. Sutton (5) mentions that pregnancy is a factor in some cases of dermatitis herpetiformis, but he does not enter into the problem of allergy.

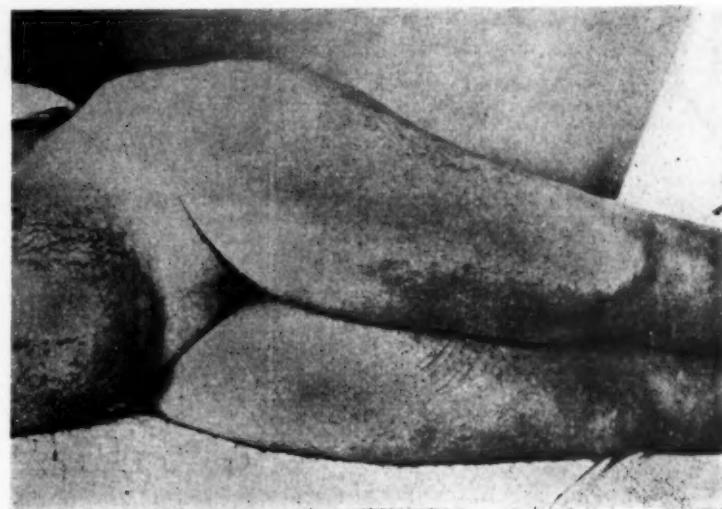
In the typical cases of dermatitis herpetiformis complicating pregnancy the rash appears in the last two weeks of pregnancy and disappears after the baby is born, so that it is rational to think, in the absence of signs or symptoms of toxemia, that there may be some allergic factor that is yet to be discovered as the cause of this disease. Plass (6) also mentions that allergic skin manifestations have been noted in pregnancy, but he gives no further details. It would seem that the obstetrician must look to the allergist for further work on this problem.

As regards therapy, symptomatic treatment directed toward relief of the itching is indicated, calamine lotion with phenol giving some relief. Gellhorn (1) mentions a treatment originated by Mayer of Tuehingen, Germany, in 1910, used in cases of eczema in pregnancy. This consists of injections of blood serum taken from normal, healthy pregnant

women. This relieved the itching and cured the eczema in the cases reported.

CASE REPORT

Mrs. H. S., a primigravida, was due to be delivered on August 9th, 1935. Her previous history was entirely negative and her pregnancy was entirely normal until August 5th, when during a pre-



natal visit she complained of intense itching of the abdominal wall. The skin in that area was covered with small papules, some having vesicles on top. Her blood pressure was 110-60. Urinalysis was normal. Fetus was in L. O. A. position, head engaged. This rash gradually spread and within two days covered practically the entire body except the face. Calamine lotion with phenol gave slight and temporary relief. After the administration of castor oil she went into labor, and had a normal delivery without a laceration.

The rash began to fade three days postpartum and had entirely disappeared ten days postpartum.

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135 Eastern Parkway.

Proceedings of the June 14th, 1935 Meeting of the Society of Plastic and Reconstructive Surgery Atlantic City, N. J.

• Dr. Jacques W. Maliniak, Chairman

(IN ABSTRACT)

Management of Large Skin Flaps

Dr. Howard Updegraff

Repair of Facial Defects with Special Reference to the Source of Skin Grafts.. Dr. Jacques W. Maliniak

Arthroplasty of the Elbow..... Dr. Charles W. Goff

Treatment of Angiomas and Pigmented Nevi

Dr. George Wyeth

Zooplasty..... Dr. H. Lyons Hunt

Plastic Operation for Retaining Artificial Eye Following

The Management of Large Skin Flaps, Howard L. Updegraff, M.D., Hollywood, Cal.

THE most important factors in the management of large skin flaps are the calculations necessary to allow for correct planning. These include allowance for actual flap contraction when cut and during transfer period; retraction of defect edges when incised and undercut; sacrifice of marginal tissue in freshening edges of flap base by torsion.

A case is cited in which the defect replaceable measured eight by ten inches and a flap ten by fourteen inches was estimated as necessary. The procedure consisted of the jumping of a flap from the nearest available unscarred skin (abdomen) to the forearm and then to the neck. Another case is mentioned where large skin and fat flaps are used following breast amputation for reconstruction utilizing the nipples for free full thickness grafts.

Repair of Facial Defects with Special Reference to the Source of Skin Grafts, Jacques W. Maliniak, M.D., New York, N. Y.

RAPID covering of raw surfaces and defects is essential to expedite healing, restore comfort and re-establish function and earning capacity. On exposed parts of the body, such as the face and neck, the covering supplied must harmonize in texture and color with the surrounding skin, even if additional or more complicated surgery is necessary to achieve this aim.

It is the purpose of this paper to evaluate various methods in the light of their cosmetic end results. While each case is an individual problem, in general it may be said that neighboring skin is preferable to distant skin for use on exposed parts because it is more likely to harmonize with its surroundings. This holds true even when visible scarring is entailed, for a thin scar is less conspicuous than a glaring patch of contrasting skin.

The sliding or rotating flap, made available by undermining and shifting the skin, is an ideal procedure. When the amount of skin available thereby is insufficient for the repair of a facial defect, the forehead flap is the method of choice in spite of the added scar. By combining the methods of serial excision and forehead flap, secondary scarring and grafting are minimized. The forehead flap is almost invariably indicated for the restoration of nasal losses.

In the reconstruction of eyelids full thickness grafts from the upper lid are preferable, while retroauricular skin is my second choice (Thiersch grafts are used to provide a socket for artificial eyes).

Tubed pedicle flaps from the neck are useful for reconstruction of the lower half of the facial skeleton. Large surfaces of the neck are best covered by delayed tubed pedicle or migrating flaps from the lateral aspect of the chest and abdomen. Although the skin on the upper back is of good texture and color and easily

Exenteration of the Orbit..... Dr. Isadore Goldstein
Repair of Partial Saddle Nose by Super-position of the Upper Lateral Cartilages

Clarence R. Straatsma, M.D.

Simplicity Versus Complicated Methods in Plastic Reconstruction of the Breast..... Max Thorek, M.D.

Histological Studies of the Fate of the Dermal Graft

Lyndon A. Peer, M.D. and Royce Paddock, M.D.

Plastic Reconstruction of the Anomalous Breast

H. O. Barnes, M.D.

accessible, the scar inflicted by its use is a contraindication, especially in women.

The thick Thiersch split graft is often preferable to the full thickness graft because it is easier to prepare, its "take" is more certain and the cosmetic results are frequently superior. Its most common uses are to epidermize extensive areas in order to prevent secondary infection and contraction, to cover burned areas on the extremities and to replace mucous membrane in the nose, mouth and orbit.

Arthroplasty of the Elbow, Charles W. Goff, M.D., Hartford, Conn.

ARTHROPLASTY of the elbow should re-establish function of the joint by reconstruction of all its component parts. The accomplishment of this fact is never completely satisfactory in spite of the fact that the elbow lends itself more readily than practically any other joint to arthroplastic measures.

Early operators used simple excision of the joint, as a rule, of the lower end of the humerus in their reconstruction procedures. This generally resulted in an unstable joint, but was better than a stiff elbow. Modern operators utilize muscle flaps, interposition of fat and fascia, with occasionally the use of Cargile membrane and muscle. Each individual case requires its own plan of shaping the new surfaces to be opposed. Many cases of ankylosis of the elbow joint, in this day of industrial and automobile accidents, follow an infection of the joint either beginning as a compound fracture or as an acid-fast affair, more often found in childhood. The tendency in acute injuries of the elbow is to attempt a closed reduction of the injured structures and to be satisfied with a stiffened elbow and at a later date an arthroplasty is done.

This necessitates considerable loss of time. A comminuted fracture of the lower end of humerus, for example, should be considered from the standpoint of future function immediately—at the time of injury. If the fracture lines into the joint are too numerous to be satisfactorily reduced, an arthroplasty is advised at once.

The author uses excision of the lower end of the humerus, shaping the surface to articulate with the ulna, and disregarding the radius. Fascia lata is interposed. This simple arthroplasty offers an excellent functional result. Occasionally, if too much humerus is excised, an unstable joint may follow.

The contraindications to arthroplasty are, eburnation following osteomyelitis, poor general health, infection about the skin of the elbow and lack of residual muscles to function after the arthroplasty has otherwise been successful.

Arthroplastic reconstruction of the elbow must be as simple as possible; it calls for motion immediately and continuous follow-up physiotherapy to secure a good stable elbow.

Conclusions Drawn from Eight Hundred Cases of Zooglandular Transplantation, H. Lyons Hunt, M.D., L.R.C.S., New York, N. Y.

At the last meeting of this Society at the New York Academy of Medicine, I reported my results in 757 cases of zooplastic graftings. These included one thyroid, one pituitary, 327 testicular and 428 ovarian transplantations. Since that time I have performed fifty-one additional transplantations, making a total of 808 cases. Among these additional cases there have been two pituitary gland transplantations. One of these was a secondary transplantation in a man who was referred to me by Dr. Samuel Seidlin, a former assistant pathologist at Johns Hopkins. The case was one of a man who had developed an obsession to the point of having tried to commit suicide on several occasions because he had an absence of any hair on his face. Three months following the transplantation he had developed downy hair on the sides of his face and a mustache, the longer hairs of which were about one-half inch in length.

The other pituitary transplantation was made on a midget $5\frac{1}{4}$ inches in height. The transplantation was performed February 26, 1935. She has grown one inch since the transplantation. Her dowager-like little form has also altered. Instead of the adipose abdomen she has lost an inch at the level of the navel and gained an inch in chest measurement. The technique of pituitary transplantation is practically the same as the technique of ovarian, thyroid, pancreatic, or testicular transplantation, the technique of which you have just seen in cinema.

I have reported before that the general effects of transplantation constituted rapid return of mental and physical vigor, better appetite, sleep, a disappearance of impotence, increased concentration and memory. In my former reports I cited many cases to substantiate these statements.

The particular purpose of this address is first to bring to your attention these two cases and to state that it is fair to anticipate, from pituitary transplantations, an increased hairy growth and an increased bony growth. Secondly, to tell you that I have recently had definite proof that transplanted glandular tissue from animals may not last more than three weeks to three months, though the beneficial effects may continue more or less indefinitely. The only reasons I can advance for this apparent anomaly are, *first*, that the transplanted animal tissue, while active in the human body and supplying its hormones, either gives the normal exhausted glands a chance to pick up and carry on after the transplanted tissue is absorbed, or, *second*, the transplanted tissue acts as a direct stimulant to normal but dormant and lazy glands.

Operation for Retaining Artificial Eye After Exenteration of the Orbit, Isadore Goldstein, M.D., New York, N. Y.

It was George Bartish who introduced the medieval, and Arlt the modern, method of exenteration of the orbit. To overcome this dreadful deformity Axenfeld suggested the operation in which the conjunctiva, lids and hair lines are preserved. Later the conjunctiva and lids are sutured. Other surgeons, as Kuster, Busache, Rollet, G. Worms and Romano-Catania, used mucous membrane grafts, skin flaps, Thiersch grafts and sliding skin flaps to obviate the deformity without the introduction of a prosthesis. But few surgeons, however, have attempted to correct this deformity, so that an artificial eye could be worn. Polya conceived the idea of introducing artificial bone into the orbital cavity and over this suturing the lids. In this manner a support is obtained for a prosthesis. The operation devised by Golovine, in which a temporal pedicle flap is taken and passed through a vertical opening at the outer canthus, through which it is carried into the orbit and sutured in place to the surrounding structures, is probably the best known procedure.

The following technique was employed by the author after exenteration of the orbit for a spindle cell sarcoma. The bony cavity was previously lined by Thiersch

grafts and the remaining portions of the lids were placed within the orbit where they became adherent to bone. The first procedure was to free the adherent lids. This was readily done and Thiersch grafts were placed upon the denuded areas on the bone and back of lids. The grafts were held in place by gauze packings. In this manner the upper and lower lids were partially restored. The lids were then divided on their margins from the inner to the outer canthus and the dissection was carried almost to the margins of the orbit. The outcome of dividing the lids horizontally for the entire length gave the effect of four lids, two upper and two lower. Into the sulcus formed by separating the upper lid into two parts was placed a thin mould of Kerr's dental modeling compound. The mould was one millimeter in thickness, fifteen millimeters wide and fifty millimeters in length. The mould was covered by a Thiersch graft placed in the sulcus and kept in position by temporary sutures holding the two parts of the divided lid together. A similar mould covered by a Thiersch graft and placed in the sulcus of the lower lid was held in place by suturing the split lid. Placing a packing in the orbit, and on the lids, immobilization was obtained. The above described plastic procedures permit the formation of accessory lids which act as a diaphragm which in turn gives support for the artificial eye. The hair lines were reconstructed following the method of Wheeler. Destruction of the lashes is not advisable; they should be retained if feasible.

Repair of Small Saddle Defects by Super-Position of the Upper Lateral Cartilages. Motion Picture. Clarence R. Straatsma, M.D., New York, N. Y.

A MOTION picture was presented to show the method of correction of small saddle defects by super-position of the upper lateral cartilages. This method makes possible repair of many saddle defects which formerly required transplants.

The method of postoperative dressings was shown in detail.

Simplicity Versus Complicated Methods in the Reconstruction of Pendulous Breasts, Max Thorek, M.D., Chicago, Ill.

1. PATIENTS often seek relief from excessively hypertrophied breasts and the train of symptoms accompanying the condition.
2. Surgeons desiring to relieve these patients should acquaint themselves thoroughly with the anatomical-pathologic factors underlying the abnormality and the methods for their relief.
3. Good results usually follow properly executed operations, but it must be remembered that amateur attempts at breast plastic have been followed by necrosis of the nipple, necrosis of the breast tissue and suppurative conditions and their sequelae.
4. The simpler the technic the better the results.
5. Patients should be told that the transplantation of the nipple precludes lactation.
6. When the pendulousity is moderate a transposition operation may be carried out successfully.

Histological Studies on the Fate of Deeply Implanted Dermal Grafts (Findings in sections from one week to one year) Lyndon A. Peer, M.D., and Royce Paddock, M.D., Newark, N. J.

DERMIS has been successfully buried beneath the skin to fill saddle noses and other defects by Eitner, Vilray Blair, J. B. Brown, and Straatsma. These men have not reported cyst formation from the hair follicles, sebaceous glands and sweat glands in the buried dermis or from remnants of epithelium incompletely removed from the dermis. The author has used large sections of dermis, fat, and fascia lata to repair postoperative defects in the skull. One such case has been observed four years and has shown no gross evidence of cyst formation. These experiments were conducted to determine the fate of the epithelial derivatives in buried sections of dermis from one week to one year.

(Concluded on page 15)

Economics

Department Editor: THOMAS A. McGOLDRICK, M.D.
Assisted by LEWIS A. KOCH, M.D.

Hospital Insurance

Development of Hospitals: The rapid advances in medical science during the past fifty years have occasioned the brilliant rise and development of our modern hospital system. In this relatively short span of time institutional care of the sick has passed from the "pest house" to the present marvels of science and healing. Throughout this period the major purpose and function of the hospitals was to aid medical science in extending the benefits of the latest chemical, physical, bacterial, diagnostic, mechanical and therapeutic discoveries to ailing individuals. The necessity of uniting all these facilities in one place was largely responsible for the growth of the modern hospital and for the great expenditures in hospital construction and equipment. This, in turn, created the problems of hospital business management and led inevitably to the introduction of many of the characteristics of the industrial and commercial institutions.

Business Management Brought Commercialism: As the attitude of business management became firmly imbedded in hospital control, it was inevitable that the ethical concepts of the profession should be crowded out. The doctor found, in many instances, that the major concept of the hospital had changed. He found it no longer existing with the attitude to aid in the care of his patient, but that he was subservient to the hospital. His usefulness to the institution was directly proportional to the income received from his patients. Pressure to utilize existing facilities to "productive capacity" that is essential to profitable operation in industry often had a tendency toward "over-hospitalization." There was the same tendency to excessive growth of plant and overhead that was inherent in industrial development, especially during the upward swing of the business cycle. Many of our hospitals were left in this over-expanded state when the inevitable economic collapse was realized.

Hospitals as such Must Be Saved: Hospitals cannot operate indefinitely when the demands for their services continue far below their normal capacity. It is essential to the public welfare and to the medical profession that these facilities be salvaged in as near their entirety as is possible. However, it is not desirable to save the attitude of commercialism which became engrafted in many of them under the guise of "business management." The fundamental fact must be kept paramount above everything else that "the hospital is only a vastly enlarged equipment and personnel designed as an aid in the practice of medicine and that however large and complex that equipment may become, the only persons whom society has seen fit to authorize to conduct that practice, with the accompanying utilization of the equipment, are members of the medical profession" (House of Delegates, A.M.A.).

The Principle of Hospital Insurance is Sound: There are undoubtedly many who need hospital care who are financially unable to avail themselves of its advantages. Likewise, there are many who do not have reserve funds to pay for both hospital care and their physicians' fees. As a result, if care is urgent, the physician invariably sacrifices his fee in part or its entirety. A reasonable and sound solution is the spreading of the cost of hospital care over a larger portion of the community. Such a plan for the payment of hospital care is not new. It has been successfully employed in certain communities in England and with some success in other cities in the United States. For a fixed annual sum the subscriber is assured varying amounts of services ranging from a limited number of days' residence in the hospital to complete institutional and medical care.

Institutional Services vs. Medical Service: The House of Delegates of the American Medical Association has

definitely ruled that in all plans for medical care, institutional services and medical services must be considered separately and that the traditional patient-physician relationship must be maintained against any effort at intrusion by a third person or party. It is made clear that an institution can give or contract to supply only institutional services and medical services can be rendered only by a physician—a real person. The medical profession considers laboratory and x-ray diagnosis as part of the practice of medicine.

The New York City Plan: The present plan of hospital insurance adopted recently in New York City was drawn up by a committee appointed by the United Hospital Fund at the request of individual hospital superintendents. Organized medicine was represented on the committee and the plan was so drawn as to segregate institutional service from medical service as well as to maintain the desired patient-physician relationship. Fees for medical services were properly not included in the plan but left as a personal arrangement between the patient and his physician. The completed plan provides that for a yearly sum of \$10.80 the subscriber shall be eligible to 21 days of hospital care in a semi-private room. If the patient desires more expensive accommodations he will be given a discount of \$4.50 a day from the cost. If he needs more than 21 days he will receive a discount of 25 per cent from the regular hospital charges. This service includes "bed and board, general nursing care, use of the operating room, ordinary medications and dressings, anesthesia, when such service is supplied by the member hospital, laboratory examinations consisting of urine examinations, complete blood count, basal metabolism, stool examinations and examination of pathological tissue, ordinary x-ray examination and other customary routine care, and shall include care of obstetrical cases after the first ten months from the effective date of the subscription agreement. The benefits do not include admission of ambulatory patients solely for laboratory or x-ray examinations for diagnostic purposes." This plan is being administered by the Associated Hospital Service of New York, a non-profit organization, and has been approved by the Department of Insurance of the State of New York. In return for services rendered by the member hospitals, the association extends remuneration at the rate of \$6.00 per day and such additional discounts as have been extended to the subscribers. Hospital services are to be rendered only upon recommendation of a physician or surgeon who is a member of the medical staff or acceptable to the member hospitals selected by the subscriber.

The Plan Includes Anesthesia, Laboratory and X-ray Examinations: The organized profession protested to the officers of the Associated Hospital Service pointing out that the inclusion of anesthesia, laboratory and x-ray services among the benefits to be rendered to the subscribers would constitute medical services which no hospital or corporation could legally contract to give. The Medical Society of the County of Kings recorded its position as follows: "Be it resolved, that this Society will endorse among the benefits to be rendered to the subscribers those services which are basically institutional functions but will not endorse the inclusion of any services which may be interpreted under the laws of the State of New York as constituting medical practice."

After several conferences the subscriber's contract was finally issued and the wording was such as to offer laboratory and x-ray "examinations." The word diagnosis was not used and the clause "the benefits do not include the admission of ambulatory patients solely for laboratory and x-ray examinations for diagnostic purposes" was added.

The medical profession must see that this part of the contract is not violated.

Hospital Superintendents Must Cooperate: It is important for the welfare of the community, the hospitals and the medical profession that this plan succeed and it is our duty as physicians to give it our support. In order to assure its final success it will be necessary that the hospitals and physicians work in the closest accord. A letter was sent to each of the superintendents of the various member hospitals in Kings County asking for their cooperation and calling attention to certain abuses which have crept into similar plans in other cities where hospital insurance has been tried. The following points were stressed:

1. **Unnecessary Hospitalization:** Coercion by subscribers, lay organizations or other bodies or officials to achieve hospitalization for that type of illness which would ordinarily be cared for at home by a private physician must not be tolerated.
2. **Admission of Patients:** Recommendation for hospitalization must be honored from a private practicing physician only and should not be honored when emanating from dispensary, admitting room official, internes or residents or paid physicians employed by the hospital.
3. Great care must be taken to assure that the subscriber shall have "free choice of physician" as the spirit of the contract between the Associated Hospital Service and the member hospital has intended.
4. It should be stressed that the hospitalized subscriber is the patient of the staff physician only, and except by his direction, no medication or surgical care may be rendered by the interne, resident, or paid physicians employed by the hospital.
5. As stated in the subscriber's contract, no patient may be admitted to the hospital solely for laboratory or x-ray examinations for diagnostic purposes. If the services of an experienced pathologist or roentgenologist are required he may expect compensation as a consultant.

Responsibility of the Profession: Each member of organized medicine should consider himself a committee of one to sponsor the plan and to see that the actual operation fulfills the object and purposes for which the plan was developed. Any apparent abuses should be reported with details and evidence to the Committee on Medical Economics of the local county medical society.

Society of Plastic and Reconstructive Surgery

(Concluded from page 13)

Experimental Procedure

Free elliptical sections of skin and subcutaneous fat were removed from the abdomens of patients having rib graft operations for saddle nose repair. The epidermis was shaved from these sections as completely as possible with a sharp No. 11 Bard Parker knife blade and the remaining dermis and fat inserted beneath the chest skin with the dermis outermost, together with the excess rib cartilage.

At intervals of 7 days, 14 days, 21 days, 2 months, 7 months and 12 months the implants were excised together with the overlying chest skin and placed in Zenker's solution.

After sectioning in the usual manner the issues were stained with hematoxylin and eosin and after examination were photographed under high and low power magnification.

Summary of findings:

1. All the grafts remained in place and quickly fused with the surrounding tissues.
2. In spite of attempted complete removal small remnants of epidermis were left on the surface of the dermal implants in most of the sections. These epithelial remnants formed small cysts of microscopic size with very little reaction in the surrounding tissues.
3. Sebaceous glands were found only in the one week sections.
4. Hair follicles were found in sections up to and including 3 weeks. The lining cells showed definite degenerative changes.
5. Sweat glands were found in all sections but in the

7 month and 1 year sections showed degenerative changes.

Further experiments are being conducted with buried dermis to determine the ultimate fate of the sweat glands and small epidermal cysts.

Plastic Reconstruction of the Anomalous Breast, H. O. Barnes, M.D., Los Angeles, Cal.

ANOMALOUS structure and form of the female breast constitutes a deformity, often physically handicapping and psychically traumatizing the owner, and hence fully justifying requests for surgical reconstruction.

Sculptural visualization, delineation and marking are absolute preoperative requisites. Physiological function, usually non-existent, is secondary to reconstruction of normal form and contour.

Surgical repair demands restoration of proportionate size, normal shape, and symmetrical fixation in anatomical location. Suspension is by non-absorbable sutures from mammary to pectoral fascia; thus the overlying skin acts more as a covering rather than as a supportive tissue.

Nipple, areola, and remaining gland tissue must be transferred to the new locus with blood and nerve supply practically uninjured.

This is accomplished by radical resection of excess tissue, leaving the base and the central core of gland intact.

Normal form and contour, as revealed through the modern garment, is the primary consideration of this operation, and scars are of secondary importance, but scarlines must be held to a minimum if the mental stigma of the former deformity is to be relieved.

Conservative Operation for "Bunions"

EARL D. McBRIDE, Oklahoma City (*Journal A. M. A.*, Oct. 12, 1935), states that the operation that he previously described and termed "a conservative operation for bunions" has fulfilled the surgical requirements and the patients' expectations, as has been shown in an analysis of thirty-nine consecutive cases. The results thus far obtained confirm the advantages suggested originally. The principle of the operation is similar to a step advocated by Silver. The valgus position of the toe is corrected by releasing the adductor tension from the outer side of the base of the proximal phalanx, and the improvement is maintained by shortening the capsule formed by the abductor hallucis. Experience with the procedure brought about the necessity of classifying the cases into types according to the length of time the deformity has existed, the age of the patient, the roentgen appearance of the sesamoid bones and the severity of the deformity: 1. In patients less than 30 years of age in whom there is a confirmed deformity, thickened painful bursa, no bone atrophy and the sesamoids are not displaced the adductor tendon is detached and transplanted to the outer side of the metatarsal head. The capsule on the outer side of the articulation is freed thoroughly, and if necessary the flexor brevis is tenotomized to relax completely the proximal phalanx. The external sesamoid is not removed and little or no excision of bone is made from the inner side of the metatarsal head. The bursa is sectioned so that the abductor hallucis is shortened. 2. In patients aged from 30 to 60 in whom there is a fixed deformity, large painful bursa, bone hypertrophy, or irregularity and the sesamoids are displaced and misshapen the external sesamoid is removed and as much bone is excised from the inner side of the metatarsal head as is necessary to satisfy the cosmetic demand. 3. In those persons who are past the age of 60 and in whom there is a possibility of circulatory deficiency the procedure is contraindicated. In all cases great care is used in respect to trauma and retraction. Release of the adductor tension and excision of the hypertrophied bone and bursa may be accomplished when there is no definite evidence of circulatory deficiency. 4. In patients of any age who have arthritis of rheumatic nature surgery should be postponed until acute or subacute inflammatory activity has entirely subsided. The plastic operation is not suitable when the articular surfaces are unsuitable for painless function of the toe.

Cancer

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EXECUTIVE SECRETARY, NEW YORK STATE COMMITTEE OF THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER

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Malignant Tumors of the Kidney

• Leo S. Drexler, M.D., F.A.C.S. and Robert E. Kinloch, M.D., F.A.C.S., Brooklyn, New York

THREE is no doubt that early surgical treatment offers the most to the patient afflicted with any form of malignant disease. With the development of urology and its highly specialized procedures, an early diagnosis of renal malignancy can be made, and we are confident that, with the ability to diagnose these cases early, the end-results will be better than those reported in cases operated upon several years ago.

In reviewing the literature, one is impressed with the general confusion that exists in the terminology, classification, histogenesis, and diagnosis of renal tumors. The reason for this is, on the one hand, the varied pathological picture and, on the other, the difficulty in determining the origin of these tumors, which resemble the adrenals in structural make-up.

In 1883 Grawitz described a group of malignant tumors due to occlusion of adrenal rests in the capsule and cortex of the kidney. He found that the structure of this tumor was analogous to that of the adrenal gland, and he termed it hypernephroma. However, most pathologists today feel that the tumor that Grawitz designated as hypernephroma is a malignant tumor of the kidney arising from kidney structures, and that, inasmuch as the term hypernephroma is misleading, this tumor should be known as carcinoma of the kidney, or nephroma.

From the clinical standpoint, renal neoplasms may be considered as originating in the renal cortex and in the renal pelvis. In the cortex, the most common tumors are adenocarcinoma, alveolar carcinoma, and sarcoma.

Foulds and Braasch have pointed out that adenocarcinoma—which is the type that is usually designated as hypernephroma—and alveolar carcinoma are quite distinct, both clinically and pathologically.

Clinically, adenocarcinoma is much less malignant than alveolar carcinoma; its growth is slower, and metastasis is late. These tumors usually arise in the upper pole of the kidney and are well encapsulated. Adenocarcinoma is characterized by a higher degree of cellular differentiation. The typical cell is large, pale, and has a distended cytoplasm. The cells lie in close proximity to the thin-walled capillaries and there is a minimal amount of connective tissue stroma. Microchemically, they show glycogen and lipoids, as do the adrenals themselves.

In alveolar carcinoma, on the other hand, solid cords, without lumina, are noted, and the tumor is composed of granular or clear cells.

Sarcoma is rare, and is usually of embryonic origin; it is, however, the predominating renal tumor of childhood. This type of tumor is found chiefly in infancy, but may also be found in children from six to eight years of age, and is usually quite large. It commonly weighs from one to four pounds, although tumors weighing as much as thirty-six pounds have been reported. The growth begins in the interior of the kidney and pushes the renal tissue aside—instead of infiltrating it—until the kidney tissue becomes reduced to a thin shell. The tumor may be solid or cystic, and at times resembles the congenital cystic kidney. Its most distinguishing feature is its embryonal structure;

in addition to kidney remnants, adenomatous tissue, muscle fibers, cellular connective tissue, cartilage and bone may be seen. Such a case was admitted on our service and reported by us several years ago. The patient, eleven months old, presented a swelling of the lower abdomen. This mass, which was movable and not tender, extended from the symphysis pubis to the umbilicus. A diagnosis was made of a Wilms tumor, and this was confirmed at operation. The pathological report revealed adenomyosarcoma.

Sarcoma of the perirenal tissue is an extremely rare condition, and usually takes its origin from the renal capsule. This type of tumor is highly malignant, and its recognition preoperatively is difficult.

TUMORS OF THE RENAL PELVIS

Tumors of the excretory portion of the kidney constitute about 5 per cent. of renal new growths. Three varieties have been described: (1) The so-called benign papilloma, in which, although the microscopic characteristics are those of a benign tumor, the behavior is often that of a malignant growth. (2) The malignant papilloma. (3) The flat or alveolar carcinoma.

The papillary type, as the name implies, appears as large groups of villi, each with a central blood vessel, about which there is a delicate stroma of connective tissue. In contrast to the non-papillary type, extension through the lymphatics and bloodstream does not occur, the growth extending along the mucous membrane of the ureter to the bladder, appearing as a papilloma of the bladder and frequently being diagnosed as such.

The non-papillary type of tumors arises from the transitional epithelium, and as the result of metaplasia, many of the cells become squamous in character. Chronic irritation plays an important rôle here, and leukoplakia frequently antedates the malignancy. Calculi and large, infected hydronephrosis often complicate this type of neoplasm.¹

The classical triad of symptoms of renal tumor in adults is hematuria, pain, and tumor. When all these are present, the diagnosis is usually quite obvious, but unfortunately, when such is the case, it indicates that the disease is in an advanced stage, and little hope can be held out to the patient.

Hematuria is an early symptom in tumors of the renal pelvis. In tumors of the cortex, however, hematuria may not be present until the tumor breaks through the capsule and invades the pelvis at a relatively late stage. When this occurs, it demands immediate investigation, during the attack of bleeding if possible. Unfortunately, bleeding is intermittent and, after it has ceased, the patient is lulled into a false sense of security.

Despite the fact that many benign conditions in the kidney, ureter, bladder, and prostate may provide the source of gross hematuria, a malignant lesion should be suspected until such a lesion is definitely excluded after careful and complete investigation of the urinary tract. Accentuation of the prostate as a source of hematuria has, on more than one occasion, resulted in overlooking the true source of bleeding, i.e., a tumor in the upper urinary tract.

Tumors in this region must be differentiated from other

From the Urological Service, Cumberland Hospital.

renal enlargements, such as those caused by polycystic kidneys, renal tuberculosis, and hydronephrosis, as well as from splenic enlargements on the left side, and other extra-renal tumors. By means of cystoscopy and pyelography, the differential diagnosis can be made with a high degree of accuracy. Pyelography, whether by the intravenous or retrograde route, is most important. The common deformities seen are elongation of the renal pelvis and narrowing or obliteration of the calices with distortion in outline.

Pain in the presence of tumor is significant; it may be interpreted in most instances of cortical tumors as resulting from extension of the tumor mass outside the renal capsule with invasion of the surrounding structures, and may justly be regarded as a symptom of advanced rather than of early disease.

Pain is usually of a dull, aching character. It may be of a neuralgic nature, or there may be severe renal colic due to the passage of clots along the ureter.

We have found, on many occasions, that the only symptoms were those referable to the gastro-intestinal tract: nausea, vomiting, and pain referred to the gallbladder and the appendix regions. In such cases the diagnosis of renal tumor was made after careful search of the gastro-intestinal tract failed to reveal the presence of pathology and after a pyelogram had been taken with the idea of ruling out pathology in the kidney before opening the abdomen. It is, of course, a much more common experience to be called upon to study a pyelogram after the gallbladder and the appendix have been removed, because of the persistence of symptoms. In one instance, which occurred several weeks ago, the surgeon was particularly annoyed when the patient developed her first attack of hematuria five days after a cholecystectomy had been done. Cystitis due to frequent postoperative catheterizations was blamed, but urological examination revealed the presence of a definite tumor of the right kidney.

Skeletal metastasis usually shows a single area of bone involvement, commonly in the upper portion of the humerus or the femur. Minute foci often occur in the lungs which are not revealed at x-ray examination and are picked up in the autopsy room after the patients have failed to survive operation more than a few days. We have, on more than one occasion, seen cases with definite metastasis to the long bones which gave so few symptoms that we ventured the removal of the primary focus in the kidney. These patients have survived for two or three years, putting on weight during this time and enjoying good health, in spite of definite evidence of metastasis. There also are numerous cases reported of spontaneous disappearance of pulmonary metastatic growths. Formerly it was thought that in cases showing involvement of the renal vein at the time of operation it could be assumed that metastasis had already occurred, even though no clinical evidence of such metastasis existed prior to the time of operation. We removed a kidney in which the renal vein was completely occluded by tumor tissue, and the patient is alive and well after three years.

INVOLVEMENT OF PERIRENAL TISSUE

In performing a nephrectomy for malignant renal disease it is necessary to differentiate between tumors that are cortical in origin and those that are primary in the renal pelvis.

Involvement of the perirenal tissue should not be regarded as a contraindication to operation in an otherwise operable case. At times extension into the perirenal fat will be found to be due to the fact that the tumor has broken through the capsule. Nevertheless, these patients live a long time following nephrectomy, and it is likely that the change in the perirenal tissue is due to a secondary inflammatory process and not to the cancer itself.

Nephrectomy alone for pelvic tumors is inadequate. To insure the best prognosis, it is essential that the entire ureter be resected. Hunt has suggested nephroureterectomy with resection of the bladder adjacent to the ureteral orifice. We learned this recently in a case in which a nephrectomy was done for a papillary tumor of the pelvis of the kidney. Hematuria recurred and a secondary ureterectomy had to be performed.

A great deal of discussion has recently arisen as to the desirable method of approach in doing nephrectomy for tumors of the kidney. We have felt that the lumbar route

is the one of choice and attended with a lower mortality than the transperitoneal route. We have reserved the anterior approach for the occasional very large tumor and in the Wilms tumor of childhood.

The operative mortality has been reported anywhere between 10 and 30 per cent. However, we do not feel that the immediate operative mortality is much above 10 per cent.

Another subject about which there is at the present time much cause for debate is the value of irradiation therapy in tumors of the kidney. Recent reports claim striking reduction in the size of tumors, and state that so-called inoperable tumors have become operable with irradiation therapy. Examination of the tumor tissue after operation has revealed definite cellular changes, such as extensive fibrosis and hyalinization with definite destruction of the architecture of the tumor. On the other hand, reliable observers have reported very little effect on the growth by preoperative x-ray therapy, and assert that whatever small reduction is gained is offset by the increased difficulties in the operation resulting from cicatricial changes following irradiation.

Another factor to be considered is that many normal kidneys are sensitive to irradiation. Experimental work on dogs has shown that a fatal nephritis can be produced by the application of hard rays through the body wall.

Hagner and Coleman recently reported a case of complete suppression of urine on the tenth postoperative day, in which the patient had received preoperative irradiation.

It seems here that the result of radiotherapy depends on the embryonic nature of the tumor and the embryonic elements present in the tumor.

In our clinic we reserve preoperative irradiation for the extremely large tumor and for the Wilms tumor of childhood. All our patients receive postoperative irradiation.

CONCLUSION

The diagnosis of renal tumors for the most part is made late in the disease. In the interest of early diagnosis of malignant disease of the kidney we wish to emphasize again that hematuria, gross or microscopic, should be regarded as an urgent indication for careful investigation of the urinary tract, and that the prognosis and curability of malignant renal disease depend on early recognition and prompt nephrectomy.

Plantar Warts, Callus and Corns

In discussing thickenings, localized and diffuse of the sole of the foot, R. O. Stein (*Wiener klinische Wochenschrift*, September 6, 1935, xlvi, 1118) distinguishes between physiological and pathological conditions. The former are painless and represent protective changes over normal pressure points. Pathological areas of hyperkeratosis occur frequently over points of abnormal pressure (flat foot, ill-fitting shoes) and for the most part are painful. J. J. Eller (*American Journal of Surgery*, September, 1935, xxix, 444), dealing with the same subject, summarizes the treatment of each type of lesions. For callus he recommends trimming it as thin as possible, following by the application of a 40 per cent. salicylic acid paste. Trichloroacetic acid applied cautiously to the affected skin may be also recommended, while for persistent cases radium or X-rays may be used. For corns, Eller suggests, first, removal of the cause (corrected shoes, dealing with foot deformities), and then conservative methods, such as soaking the corn frequently in hot water, paring it with a knife and then applying trichloroacetic acid to cauterize the centre. Stein remarks that warts of the foot are becoming more common, and this he attributes to the increasing popularity of sun and sea bathing, whereby the bare foot has more opportunity of being infected by the virus responsible for warts. Eller thinks the best treatment for plantar warts is electro-coagulation after anaesthetizing with novocaine. This latter is important, as Stein stresses the extreme degree of sensitivity to pain on pressure of the tissues immediately around a wart. This author adds to a long list of remedies the use of carefully screened X-rays, and also records the use of a "vaccine," prepared by extracting what is presumably the infecting agent from the wart itself.—*Practitioner*.

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OPHTHALMOLOGY

Glaucoma Accompanying Nevus Flammeus

E. B. Dunphy (*American Journal of Ophthalmology*, 18:709-714, August, 1935) notes that while the association of glaucoma with nevus flammeus has been recognized for many years, only 61 cases have been reported in literature; in these reported cases the eyeball has been examined histologically in 13 cases. The author reports 2 additional cases of glaucoma associated with nevus flammeus, in one of which the eye was enucleated and examined histologically. Of the 14 cases in which histological examination of the eye was done, 10 showed angioma of the choroid; in one case angiomatic changes in the iris extending to the iris angle were found; in one irregularities of Schlemm's canal and the scleral spur; in the remaining 2 cases no angioma and no obstruction of the iris were demonstrated. The author concludes that in most cases in which glaucoma is associated with nevus flammeus, it is due to an obstructed filtration angle resulting from angiomatic changes in the uvea or from adhesions in the iris caused by the toxic action of degenerative changes in the eyeball. In all cases examined histologically the intraocular capillaries were dilated, which implies increased capillary permeability and increased formation of aqueous, with probable increased protein content. All these factors lead to blocking of the anterior chamber and increased intra-ocular tension.

Cervical Sympathectomy in Retinitis Pigmentosa

G. de Takats and S. R. Gifford (*Archives of Ophthalmology*, 14:441-452, September, 1935) note that retinitis pigmentosa has not been greatly influenced by any method of therapy. After Royle of Australia reported improvement in vision in cases of retinitis pigmentosa following a sympathectomy done early, others also have reported some favorable results obtained by sympathectomy operations of various types. The authors report 6 cases of retinitis pigmentosa in which sympathectomy was done; 11 operations were performed in these 6 cases. Of these operations 4 consisted of cervicodorsal and 7 of superior cervical ganglionectomies. The latter, if combined with stripping of the internal carotid artery, was found to be the simplest and most reliable method of obtaining complete sympathetic denervation of the eye. Three of these patients were adults with a history of night blindness or poor vision for twenty-two to thirty years. None of these patients showed any improvement in vision; their disease has not progressed, but none have been under observation more than a year and a half; this is too short a period to judge of the effect of operation on the progress of the disease. Of the 3 younger patients, complete sympathetic denervation was not obtained in either eye; one has shown no improvement; one, although showing no increase in visual acuity or visual fields, claims improvement in night blindness. The authors conclude that further studies should be made on the effect of sympathectomy on dark adaptation and minimal light perception in cases of retinitis pigmentosa. Judged by their results, "the only possible benefit is that which might arise from halting the progress of the disease."

COMMENT

Retinitis pigmentosa has always been a bête noire of ophthalmology. There have been long periods in which no treatment was considered to be of any value whatever, alternating with others in which some new theory was being tried. These experiments have naturally been directed at the symptoms of the disease which are evident, rather than at the cause of which we know little. Inasmuch as the normal course is long and the progress slow first enthusiasms have invariably claimed more than longer experience justified.

One of the outstanding characteristics has been the shrinking of the retinal circulation, and some of the earlier observers hoped and claimed that sympathectomy would secure in this field the same happy results it had brought about in some others. But there are difficulties both theoretical and practical. In the first place the vascular shrinkage is the result rather than the cause of the retinal atrophy, and it seems improbable that dilation of the vessels would do any good even if the operation were simple and safe.

The authors discuss impartially the doubts and the difficulties, and from their own experience, and that of other competent men, reach the conclusion in the last paragraph of the review. But if time confirms the statement that sympathectomy may be capable of "halting," though not curing, the disease, no small step will have been taken.

E. M. A.

Streptococcus Infections of the Eye

S. Spiratos (*Archives d'ophthalmologie*, 52:505-512, July, 1935) reports a case of streptococcus pneumonia in which an iridochoroiditis developed during convalescence; in eleven days there was a small perforation in the upper portion of the eyeball with escape of pus, after which the symptoms of inflammation subsided, but the eyeball began to atrophy. A streptococcus of the viridans type was isolated from the sputum and also from the pus obtained by puncture of the vitreous body; a hemolytic streptococcus, however, was isolated from the conjunctival secretion. It is possible that in this case the viridans streptococcus was transformed into a hemolytic streptococcus, but no evidence could be obtained to indicate that this was the case. The viridans streptococcus isolated maintained its characteristics with no tendency to mutation in all cultures. In experiments on rabbits' eyes in which viridans streptococci were injected into the vitreous body in some animals and hemolytic streptococci in others, no tendency to mutation was observed. The author is of the opinion, therefore, that in the case reported the viridans organism were the cause of the iridochoroiditis, and the hemolytic streptococcus was present at the same time on the conjunctiva. At the same season of the year (December and January) in which this case was observed, several cases of conjunctivitis and corneal ulcer were observed in which a hemolytic streptococcus was the causative organism. In 220 cases of catarrhal conjunctivitis observed during the year, 17 were due to a hemolytic streptococcus; in 29 cases of corneal ulcer, 2 were due to a hemolytic streptococcus; and in addition 3 cases of panophthalmitis resulting from an injury to the cornea were due to this organism. Of these 22 cases of streptococcus hemolytic infection of the eye, 9 cases, including the most severe infections, were observed in December and January.

MEDICINE

Sugar Tolerance in Obese Subjects

R. F. Ogilvie (*Quarterly Journal of Medicine*, 4:345-358, October, 1935) reports sugar tolerance tests in 65 obese patients, all but two of whom were women; the age varied from twenty-three to sixty-five years; and the percentage of overweight from 14 to 137 per cent. It was found that sugar tolerance diminishes as the duration of the obesity increases. In about one-third of the patients studied, there was a preliminary phase of increased sugar tolerance, but in most cases the sugar tolerance was normal in the early stages of obesity. Sugar tolerance steadily diminished after obesity had persisted for eleven years; and all the patients who had been obese as long as eighteen years showed a definitely diminished sugar tolerance, which had advanced to actual diabetes in some cases. Sugar tolerance was not found to be related to the amount of overweight. In some instances it was found that the cessation of ovarian function at the menopause had a definitely unfavorable effect on the sugar tolerance.

COMMENT

Joslin and his group have well shown that the best preventive measure we have against diabetes is to keep the weight down to normal. Disturbances of sugar tolerance and cholesterol metabolism are apt to follow obesity but it requires some time for them to develop. Obesity is usually due to a diet deficiency and without question it becomes a disease in time.

M. W. T.

Carbonic Acid Gas in the Treatment of Pneumonia

L. Gunther of Los Angeles (*California and Western Medicine*, 43:346-365, November, 1935) reports the use of inhalation of carbonic acid gas (carbon dioxide) in the treatment of pneumonia. This method of treatment is based upon the findings of Henderson and Haggard in regard to the value of carbon dioxide inhalations in relieving asphyxiation and atelectasis, and upon the findings of Coryllos and his co-workers that there is an early atelectatic stage in pneumonia. The author has used carbon dioxide inhalations in the treatment of pneumonia since 1930. One hundred per cent carbon dioxide gas is given by the drip method through a rubber tubing of small caliber held about one inch above the nose or mouth; the gas is allowed to flow at the rate of about 4 liters per minute. A stiff linen towel is folded lengthwise and wrapped around the patient's head from chin to vertex, to form a shallow cup with the face as a base. The gas is administered until a hyperpnea develops and for a minute after that; and is then discontinued. After three to five minutes' rest, a similar hyperpnea is induced. This procedure is repeated every three or four hours until the temperature becomes normal. The first few breaths of gas usually make the patient cough; after the administration of the gas is completed, there is usually a severe paroxysm of coughing with "surprisingly large quantities" of yellow sputum. The patient often falls into "a sleep of exhaustion" after this paroxysm, but awakens with a feeling of well-being. Symptoms of toxicity show a marked decrease and the temperature usually becomes normal by the third day. Signs of resolution begin four to seven days after the first administration of the gas in lobar pneumonia and in three to five days in bronchopneumonia. In cases in which there is severe prostration, high fever and marked cyanosis at onset, patients become clinically well within twenty-four hours after the carbon dioxide inhalations are begun; these cases probably represent the pure atelectatic stage that "precedes and ushers in pneumonia," according to Coryllos. In approximately 100 cases in which this method has been used, there was one death and three failures to obtain defervescence as anticipated. Treatment was begun in most instances within twenty-four hours after the first chill.

COMMENT

Valuable. However, we constantly see author's obser-

vations on a hundred cases of pneumonia. These are not of much value because in the ordinary run of cases the first series of a hundred cases may all recover and in the next series they may all die. This work will be continued and further observations awaited with keen interest.

M. W. T.

Estimation of Basal Metabolic Rate from Pulse Rate and Pulse Pressure

B. I. Comroe (*American Journal of Medical Sciences*, 190:371-376, September, 1935) discusses the formulas proposed for the estimation of basal metabolism from pulse rate and pulse pressure—that of Read (1924), Read and Barnett as revised in 1934, and that of Gale and Gale (1930). In a series of 100 ambulatory patients at the University of Pennsylvania Hospital, basal metabolic rates were determined in the usual way with the Sanborn-Benedict apparatus, and also calculated according to each of the three formulas—Read, Read-Barnett, and Gale-Gale—from the blood pressure and average pulse rate. Patients with arrhythmia, hypertension and other cardiovascular disturbances "which produce alterations in the pulse rate and pulse pressure obviously not caused by changes in blood flow" were excluded. It was found that there was no significant difference in the results obtained by the three formulas, but the Read-Barnett formula was somewhat more accurate. With any formula the method is "crude," as results will be 20 per cent. too high or too low in a certain percentage of cases. This method cannot be used as a rule as a substitute for basal metabolism determinations, but if for any reason calorimetric estimations are impossible, calculation of the basal metabolic rate from pulse pressure and pulse rate data is more accurate "than attempting to guess this figure from either observation taken separately."

COMMENT

There is only one way to estimate the basal metabolism rate and that is the classical method. We have tried several of these short-cuts and they are worthless; besides, they are apt to give the patient a false sense of security. The writer does a blood cholesterol estimation in conjunction with the basal metabolism test and if the cholesterol is high, thyroid extract is given even if the basal metabolism rate is normal. In our opinion, basal metabolism estimations are subject to all sorts of variations, whereas the blood cholesterol is usually constant. Therefore, we believe that in all cases the two estimations should go hand in hand.

M. W. T.

Calcium and Parathyroid Therapy in Chronic Ulcerative Colitis

B. Haskell and A. Cantarow (*American Journal of Medical Sciences*, 190:676-683, November, 1935) note that in 1931 they reported the treatment of 13 cases of ulcerative colitis with calcium (in the form of calcium gluconate by mouth) and parathyroid extract (parathormone given by intramuscular injection). Eleven of these 13 cases became clinically well after treatment, and 9 of these patients have now been under observation for periods of two to six years after their original course of treatment. Of these 9 patients, 5 have remained "essentially symptom-free"; brief recurrences occurred in 2 cases which responded promptly to another course of treatment; one patient with nephritis and anemia failed to improve; one patient died from pneumonia after remaining well for three years. Sixteen additional cases have been treated by the same method since the first report; and have been under observation for periods of six months to four years. Eight of these 16 patients became clinically well, 7 others have been relieved of their severe symptoms and are in "fairly" normal health, although showing some evidence of persisting colonic irritability; one patient was not improved. The two outstanding symptoms of ulcerative colitis that respond most promptly to the calcium-parathyroid treatment are bleeding from the bowel and colonic spasm and hyperirritability. Cessation of bleeding was usually the earliest and most constant indication of im-

provement under the treatment. Marked reduction in pain and in frequency of stool was the next indication of a favorable response; this was obtained in some cases in which full doses of belladonna had been ineffectual. Response to treatment was usually prompt, but in 3 cases definite improvement occurred only after three months' continuous administration of calcium and parathormone. The authors believe that "the rationale of calcium therapy" in chronic ulcerative colitis rests on "the favorable influence of calcium upon the following existing conditions: a, Nutritional changes in the tissues with or without disturbance of calcium partition; b, spasticity and hyper-irritability of the colon; c, slow capillary bleeding."

COMMENT

Interesting observations in a small number of cases. One wonders if as good results cannot be obtained with a concentrated diet.

M. W. T.

Cardiac Output in Common Clinical Conditions

I. Starr, Jr. and C. J. Gamble (*Annals of Internal Medicine*, 9:569-585, November, 1935) report a study of cardiac output in normal persons and in certain common diseases, especially myocardial insufficiency. In normal persons, they find that there is a definite level of "basal cardiac output" characteristic for the individual and analogous to the basal metabolic rate; it is roughly related to the size of the subject; it is elevated in adolescence, and tends to decline after the age of fifty; the cardiac output is raised above the basal level by taking food, by drinking large amounts of water, by exercise and by excitement. The average basal cardiac output is increased in hyperthyroidism, in anemia and in (experimental) fever; it is essentially unchanged in the common non-febrile diseases, such as diabetes, gastric ulcer, neuroses, etc., and as a rule in both hypertension and hypotension; it is also unchanged in certain serious diseases of the heart. But it is diminished in patients who have once had congestive heart failure, even if the test is made when they have recovered from decompensation. It is also diminished in neurocirculatory asthenia; the symptoms simulating serious cardiac disease in such cases may well be attributed to this diminished circulation. It has been found that in some cases of hypertension there is a diminished cardiac output; this is a type of compensation by which the heart by reducing its output can maintain a high blood pressure without doing more work than normal; in such cases of hypertension, cardiac hypertrophy does not occur. In a study of cardiac work in relation to the size of the heart, the authors conclude that in hearts with normal myocardium, the work of the heart per beat is a function of its size, as also shown by the experimental work of Starling; but in cases with a diseased myocardium this law does not hold. That type of myocardial insufficiency that leads to congestive heart failure is characterized by cardiac enlargement, but diminished cardiac output. A moderate increase in the size of the heart may be physiological; and in conditions in which the heart work is ordinarily increased by hyperthyroidism, hypertension and anemia, such an increase in heart size does not indicate myocardial dysfunction. But in general, in all other conditions, the best objective sign of myocardial weakness is a definite increase in the size of the heart.

COMMENT

One of the easiest methods to diagnose the cardiac picture is by x-ray. Levene and his co-workers have shown that under the fluoroscope diminished amplitude and flattening of the left border of the heart are indicative of coronary disease. This diagnosis by amplitude is extremely easy and important. Radiographic methods permit us to study the actual size of the heart by measurements. The time to work on heart disease is before it develops.

—M. W. T.

SURGERY

Clinical Significance of Experimental Studies in Wound Healing

E. L. Howes and S. C. Harvey (*Annals of Surgery*, 102:941-945, November, 1935) review their findings in regard to the healing of wounds studied experimentally from which they conclude that the healing of a wound is "a variant of growth" and is thus a fundamental biologic phenomenon. Healing, their studies have shown, occurs in two phases: First, fibroplasia, and second, the differentiation of the fibroblasts so produced into specific adult tissue. The healing of a wound in its first phase of fibroplasia has been found to be a phenomenon common to all tissues; it originates from "resting" and relatively undifferentiated cells closely related to the mesoblast. The second phase of differentiation occurs in the same manner as the original differentiation of these structures from the mesoblast. Experimentally it has been found that wound healing is delayed by profound systemic changes that derange "the chemical balance" of the subject. Certain local factors may, however, delay wound healing, chiefly by retarding the onset of fibroplasia, rather than inhibiting the growth of the fibroblasts when this is once initiated. Local factors that act in this way are those that increase the exudative reaction in the wound, such as infection, trauma, the presence of dead tissue such as blood clot or suture material. These findings emphasize the importance of the protection of tissues from damage, of obtaining as perfect hemostasis as possible, and of burying only the kind and quantity of suture material necessary to insure continuity of the wound until it attains the necessary degree of healing strength.

COMMENT

The story of these studies is extremely interesting and convincing. The facts discovered by or deduced from the findings are easily established and are important guides for the surgical clinician. C. H. G.

Liver Resection

M. B. TINKER of Ithaca, N. Y., (*Annals of Surgery*, 102:728-737, October, 1935) reports a case in a woman sixty-five years of age, in which the chief symptom was abdominal pain, suddenly becoming severe. At operation a tumor oozing blood was found in the left lobe of the liver; resection "wide of the growth" was done using a medium radio-cutting current. This controlled bleeding from the smaller blood vessels. Bleeding from the larger vessels was controlled and then the edges of the defect approximated by mattress sutures of chromic catgut. Pathologically the tumor was a hemangioma. The patient is living and well sixteen months after operation. The author notes that liver resection has not frequently been done. Twenty-one members of the American Surgical Association have reported 24 operations of this type, including the case reported above. This number has been increased by personal communications to the author since this paper was presented. The author is of the opinion that electrosurgery using the radio-cutting current is of definite value in liver resection; it is less destructive than the actual cautery and equally effective in arresting oozing of blood. One favorable factor in liver resection is the fact that regeneration of liver tissue occurs quite promptly and quite completely, as has been shown both experimentally and clinically. He is of the opinion that with improved technique, liver resection will be done more frequently in cases of tumor of the liver and with increasingly better results. In cases of malignancy, radium may be combined with surgery.

COMMENT

The availability of radio-cutting current in cases requiring resection of a portion of the liver is again clearly demonstrated by a thoughtful surgeon and an accurate reporter. C. H. G.

Treatment of Hemorrhage By Injection of Artificial Blood Substitutes

A. W. J. H. Hoitink of Utrecht, Holland (*Surgery, Gynecology and Obstetrics*, 61:613-622, November, 1935) reports experiments on dogs in which severe "fatal" hemorrhages were produced to determine whether life could be saved by the intravenous injection of various "blood substitutes," including sodium chloride solution. He found that sodium chloride solution (0.9 per cent) gave better results in stimulating blood regeneration and in saving life than other "more complicated manufactured substitutes." A review of the literature showed that other investigators had come to similar conclusions in regard to the superiority of sodium chloride solutions in the treatment of severe acute hemorrhages. In acute dangerous hemorrhages, the author maintains, the chief need is to replenish the fluid in the blood vessels so that the circulation can continue. The introduction of blood from without the body is not necessary, and may even be dangerous. For this reason, he prefers sodium chloride infusions to blood transfusion in the treatment of hemorrhages of this type. The sodium chloride solution should be at blood temperature for infusion and should be given under some pressure, "in order to give an impetus to the insufficiently circulating blood." Sodium chloride solution, 0.9 per cent, is a blood substitute that can be prepared "at any place at any moment" and is easily administered, while at the same time it is, the author maintains, the most efficient treatment for severe acute hemorrhage.

COMMENT

Back to the century's first decade! Sodium chloride solution intravenously has saved many lives!—C. H. G.

Transfusion of Preserved Blood Plasma In Hemorrhage

E. Burceva (*Archiv für klinische Chirurgie*, 182:710-717, October, 9, 1935) has found that blood plasma can be preserved without becoming infected and without loss of its hemostatic properties for weeks. It is prepared under aseptic precautions and kept in sealed ampules in a cool dark place; the optimum temperature is from 4 to 10°C. In the treatment of hemorrhage it is injected slowly into the vein, after being warmed to 40°C. and, if necessary, filtered through several layers of gauze. In 106 cases of hemorrhage of various types, a total of 143 plasma infusions were given. It was found that from 20 to 40 c.c. of plasma was usually necessary to control hemorrhage, although the coagulating power of the blood was increased, as a rule, by smaller amounts. Excellent results were obtained in gastro-intestinal bleeding, including hemorrhage from gastric ulcers, and in post-operative bleeding. Plasma infusion also gave good results in hemophiliacs in controlling bleeding from extraction of teeth or minor surgical procedures.

COMMENT

This is a real contribution in hemotherapy. Although fresh blood is usually obtainable and transfusions possible, promptness and reduction of technical detail might well be served with a stock of blood plasma always on hand.—C. H. G.

Fatal Cases of *B. Coli* Septicemia Following Gastric Operations

F. W. Ilfeld (*Archives of Surgery*, 31:632-641, October, 1935) reports a case in a woman fifty-eight years of age, in which a gastro-enterostomy was followed by a high temperature (106.6° F.), signs of vascular collapse and death in eighteen hours. *B. coli communis* was recovered from the blood before death. Autopsy showed no sign of localized infection, peritonitis or hemorrhage, and death was attributed to overwhelming *B. coli* septicemia. No report of such a case was found in the literature, but in reviewing the records of the Lakeside Hos-

pital, Cleveland, Ohio, where this patient was operated, it was found that in 416 cases in which gastric operation had been done in thirteen and a half years, excluding cases of perforated gastric ulcer, there was one other case in which death occurred postoperatively in which *B. coli* had been isolated from blood before death; and a third case in which the symptoms had been similar to the other two, but no blood culture had been made. In the second case a blood count was made and showed a leukopenia with 4,000 white cells. This aided in the differential diagnosis between overwhelming infection and hemorrhage. In the entire series of 416 gastric operations there were 79 postoperative deaths of which 2 were attributed to *B. coli* septicemia, and possibly a third death could be so attributed. Two deaths were also attributed to hemorrhage. The cases of *B. coli* septicemia simulated hemorrhage in the sudden vascular collapse and rapidly fatal outcome.

COMMENT

This very interesting report excites a desire for deeper study in cases presenting a related symptomatology. We know of no comparable records in literature as we recall many reported instances of a like manner of death due to other causes. We cordially wish for the author no more experiences of this kind. However, we recognize that further studies along this line by any progressive surgeon may prove of great value in determining the cause of the strange, elusive, uncontrollable postoperative disappearance of some patients.—C. H. G.

Symptoms That Persist After Cholecystectomy

J. F. Weir and A. M. Snell (*Journal of the American Medical Association*, 105:1093-1098, Oct. 5, 1935) in a study of persistent symptoms after cholecystectomy conclude that in a majority of cases erroneous diagnosis and imperfect selection of cases are responsible for the persistence of symptoms after operation. Complete relief of symptoms by cholecystectomy is not to be expected when there are associated lesions in other organs. Recurring postoperative colic is most apt to be due either to stone in the common duct or to residual infection in the ducts, liver or pancreas. At operation thorough examination of the common duct, liver and pancreas is essential. It has been found that the liver is frequently involved in cases of gall-bladder disease; after cholecystectomy, many of these lesions regress or become inactive, but they may persist sufficiently to cause symptoms. In a few cases postoperative colic can be explained only on a neurogenic basis—a "biliary dyskinesia." In a few cases of this type at the Mayo Clinic relief has been obtained by paravertebral or splanchnic nerve block with procaine, which indicates the possible nervous mechanism involved. In one case in which splanchnic nerve section was done, relief was obtained; but in another there was little improvement. Prolonged drainage of the common duct with a T-tube gives good results in some cases; dietary regulation and medical treatment in others.

COMMENT

This is a very valuable review of unsatisfactory incidents after cholecystectomy. The observations are of unquestionable reliability and the deductions therefrom are most reasonable.—C. H. G.

UROLOGY

Treatment of Carcinoma of the Prostate Gland By Transurethral Methods

G. J. Thompson and J. L. Emmett (*Urologic and Cutaneous Review*, 39:679-685, October, 1935) report that at the Mayo Clinic prostatectomy was done in 95 cases of carcinoma of the prostate; of these 21, or 22 per cent, lived or are living five years or more after operation; in none of these cases was the radical operation with removal of the vesical neck and seminal vesicles done.

In the same period permanent suprapubic drainage was done in 144 cases of carcinoma of the prostate; of these 120 patients have died; 20 could not be traced; and 4 are known to be living. Since transurethral methods have been developed so that large obstructing portions of the prostate can be removed, cystotomy for the relief of urinary obstruction in prostatic carcinoma has rarely been done at the Clinic. Up to April 1, 1934, transurethral resection has been done in 107 cases of prostatic carcinoma. The smallest amount of tissue removed in any case was 1.5 gm., the largest amount, 37 gm.; the average, 9.2 gm. The authors note that in transurethral resection of carcinomatous prostatic tissue, bleeding is less than in benign hypertrophy. It is more difficult to obtain good function early in prostatic carcinoma than in the benign lesion; this may be due to some loss of elasticity of the vesical neck, to involvement of the external sphincter, or to fixation of the base of the bladder; there was only one case of permanent incontinence in the series reported. Of the 107 cases operated 51 have died and 56 are living; only one death occurred post-operatively, due to pneumonia. Of 64 patients with malignancy of grade 3 or 4 (Broders' classification), 61 per cent have died; of the 42 cases with malignancy of lower grade, only 26 per cent. are dead. Of the 31 patients surviving with carcinomas of the lower grade malignancy, 20 are voiding with a free urinary stream, 9 report only a "fair" urinary stream, but only 2 have resorted to a catheter. Of the 25 surviving patients with carcinomas of grades 3 and 4, 17 have a good urinary stream, and only one has to use a catheter routinely. Most of these patients "express themselves as satisfied with the relief obtained by transurethral operation." The authors conclude that since carcinoma of the prostate usually occurs in the seventh decade of life, and that in the majority of cases the carcinoma has extended locally or metastasized, "beyond hope of cure," transurethral resection for the relief of urinary obstruction is the treatment of choice. Transurethral resection may be combined with implantation of radium emanation seeds, or with deep roentgen therapy. In cases with demonstrable metastasis, roentgen-ray therapy combined with transurethral resection is indicated. Greater expectancy of life and greater comfort result from such treatment than from other surgical procedures.

COMMENT

The impressive facts in this study are the wise selection of cases, the adaptation of conservative methods to them and the terminal functional results even for the brief term of life allotted to these unfortunates. Likewise of importance is the addition of radium and x-ray to the surgical technique. The variations in response by cancer warrant the policy of always and adequately trying either radium or x-ray with persistence.—V. C. P.

Retention of Urine Due to Ephedrine

J. J. Valentine and J. S. Fitzgerald (*Journal of Urology*, 34:314-323, October, 1935) report that in less than a year, 3 cases of acute retention of urine due to ephedrine were observed on the Urological Service of Morrisania Hospital. In all these cases the ephedrine had been given for the treatment of asthma. From a review of the literature and a study of these cases, the authors conclude that ephedrine is a sympathico-mimetic and causes retention by increasing the spasm of the internal sphincter, so that it is "greater than the power of voluntary control." On the basis of these findings, ephedrine was used in the treatment of 5 cases with dribbling and incontinence of urine following prostatectomy or prostatic resection or (in one case) a lesion of the central nervous system. The ephedrine sulphate was given by mouth in doses of 3/8 to 3/4 gr. three times daily. In 2 cases there was no definite improvement; in one case, a very gradual improvement in urinary control (after prostatectomy) which could not be definitely attributed to the ephedrine. . . . In 2 cases the effect of the ephedrine was more definite; in both the tone of the internal sphincter was

improved and dribbling of urine ceased. These results, though inconclusive, the authors believe, "warrant further observation."

COMMENT

As in the older drugs so also in the newer preparations there are disadvantageous reactions in some patients. It would be interesting to know whether the asthma was conspicuously benefited at the same time that the spasm of the sphincter of the bladder was induced. To have benefited bronchial spasm while exciting sphincteric spasm would be a physiological quasi-contradiction. Another question is, might not ephedrine in the urine shrink the bladder mucosa extremely and thus induce closure of the neck, exactly as it shrinks the nasal mucosa excessively in some patients?—V. C. P.

Sodium Chloride Restriction and Urea Clearance in Renal Insufficiency

E. M. Landis and his associates at the University of Pennsylvania (*Journal of Clinical Investigation*, 14:525-541, September, 1935) report studies of the effect of sodium chloride restriction on renal function as indicated by the urea clearance and determination of the plasma urea nitrogen in 3 patients with varying degrees of renal insufficiency. A preliminary study on 2 normal subjects showed that urea clearances determined for twenty-four hour periods varied less widely than the usual urea clearances determined over one hour periods. In the cases studied, therefore, average urea clearances over twelve and twenty-four hour periods were used to determine the effect of sodium chloride restriction and administration. With this method it was found that, when diet and fluid intake were kept constant, restriction of the sodium chloride intake was accompanied by a slightly diminished average urea clearance for the twenty-four hour period, and a slight rise in the plasma urea nitrogen. The administration of sodium chloride resulted in a lowering of the plasma urea nitrogen and a higher average twenty-four hour urea clearance. In these 3 cases, two hour urea clearance determinations did not show changes that could be ascribed to variations in the salt intake, but the twenty-four hour determinations showed the "small but apparently consistent changes" noted. In one patient with advanced renal insufficiency, administration of sodium chloride decreased the plasma urea nitrogen from 154 to 26 mgm. per 100 c.c.; marked restriction of the sodium chloride intake produced hypochloremia with characteristic symptoms; and temporary retention of urea, creatinine and phosphates. Renewed administration of sodium chloride relieved the symptoms and diminished the concentration of urea, creatinine and phosphate in the plasma. The urea and creatinine clearances over the twenty-four hour period in this patient were slightly lowered during and shortly after sodium chloride restriction, and increased somewhat during sodium chloride administration. The authors note that "the exact mechanism by which renal function can be reduced during chloride restriction must await further opportunity to study other patients with hypochloremia and conspicuous azotemia."

COMMENT

A very interesting point about chloride of sodium is the seemingly contradictory facts in nature about it. Farm animals seek it with avidity and wild animals are said to travel miles for it. Civilised man uses it in almost all food. Yet the Equidae have the same word for salt, ocean and nasty. They never use it and can detect very small amounts added to food. Their diet, largely of ocean fish, must give them all they need. It is certain that they cannot live with literally no salt whatever. These differences between them and civilized man bring up the question of bodily habit and of the advisability, therefore, of always making studies such as these extend over many days so as to determine whether or not nature strikes a physiological balance after a few days of imbalance.—V. C. P.

The Indigo Carmine Test

R. Chwalla (*Zeitschrift für Urologie*, 29:673-688, October, 1935) reports the use of the indigo carmine test in 7 cases of acute glomerular nephritis, and in 23 cases of subacute nephritis. In these cases he found that failure to eliminate the dye or a much delayed elimination indicated a definitely unfavorable prognosis as to ultimate recovery. A normal excretion of the dye in most instances indicated a favorable prognosis, but did not entirely exclude the possibility of the development of a chronic nephritis. In general this test was found to give results parallel with other renal function tests. In 21 cases of chronic nephritis, the excretion of indigo carmine was normal in 5 cases; this is to be explained by the mild chronic nature of the disease, or by a definite nephrotic tendency. In the other cases the excretion of the dye was definitely delayed or deficient. Of 3 cases of genuine nephrosis, 2 showed a normal excretion of indigo carmine and one a very slight delay in excretion. Nephrosis, as recent studies indicate, is not a true renal disease, but rather a general disease; and the results of this test support this conclusion.

COMMENT

The elapsed time and the color standard of excretion tests are open to uncertainties, although, of course, dye-tests are very valuable. An artist once showed me what almost all doctors do not know, namely, that color-absorption accounts for a large percentage of apparent loss in excretion. Taking phenolsulphonphthalein as an example a light colored urine absorbs 5%, a darker 10% and a dark urine 15%. The only check-up is to take a specimen of the urine, add the percentage of the reading, say 30%, and see whether or not the final result is 5, 10 or 15% less. Unless such a check-up is made I feel that the finest work is not being done. These principles apply to indigo carmine because part of the delay may be only a color loss.—V. C. P.

Transuretero-Ureteral Anastomosis

C. C. Higgins (*Journal of Urology*, 34:349-355, November, 1935) notes that the operation of transuretero-ureteral anastomosis has been done experimentally on dogs and also on the cadaver; and has been shown to be anatomically feasible. He reports a case in which the operation was done on a man twenty-five years of age, who had severe pain in the right kidney region whenever he urinated. He had previously been operated for the removal of a large diverticulum of the bladder containing stones. Examination showed the function of the right kidney to be good, but that at every attempt to void urine there was a reflux up to the right kidney pelvis that caused pain and was gradually producing a hydro-ureter and hydronephrosis. Nephrectomy was not indicated in this case as the function of the kidney was good. Re-implantation of the ureter into the bladder was impossible as the previous diverticulectomy caused the peritoneum to adhere closely to the bladder so that a suitable site for re-implantation could not be found. In this case, the author "hesitated" to transplant the ureter into the bowel. As there was a dilatation of the left ureter it was decided to re-implant the right ureter into the left at the site of this dilatation. A mid-line incision was made in the abdomen, the intestines were packed away, and the right ureter exposed by an incision in the posterior parietal peritoneum. This ureter was freed from its bed to within one-half an inch from the bladder; clamped, divided and ligated; the proximal end was then fully isolated for about three inches. The left ureter was then identified and exposed at the site of the dilatation; two ureteral catheters that had been placed in this ureter were palpable. A tract was made behind the posterior parietal peritoneum with a curved clamp, from the right ureteral bed to the point where the anastomosis was to be made; the mobilized end of the right ureter was then brought through this new bed and through the peritoneum at the site for anastomosis. A small incision was made in the left ureter and one of the catheters brought through this opening and passed up through the open end of the right ureter to the renal

pelvis to act as a splint. The end of the right ureter was then anastomosed to the side of the left ureter with interrupted sutures of triple O chromic catgut. The incision in the posterior parietal peritoneum was not closed tightly; drainage was established by a stab incision to the region of the anastomosis and a strip of rubber tissue dam placed over the site. The patient made a good recovery; the patient was entirely relieved of symptoms; and both kidneys were found to have good function a year and a half after operation. This procedure of transuretero-ureteral anastomosis, the author believes, would seldom be indicated, but the results in the case reported prove it to be "an anatomic and physiologic possibility" which "adds another conservative technic to the armamentarium of urologic surgery."

COMMENT

The mechanical details of this operation were unusually "inviting." An altered bladder, an open ureter and definite pain and damage to the kidney on one side. The opposite ureter was dilated almost as though made to order. No other procedure was in all the circumstances possible. Although the late Charles McBurney often said: "Beware of the man with one case," when one case fills all the requirements of common sense, surgical skill and final benefit it becomes a reliable point of reference and should be published in great detail, as in this instance.—V. C. P.

PEDIATRICS

Prevention of Rickets with a Cod-Liver Oil Concentrate in Milk

M. G. Peterman and E. Epstein (*American Journal of Diseases of Children*, 50:1152-1158, November, 1935) report a study of 26 infants fed on a standard evaporated whole milk mixture, to which a cod-liver oil concentrate was added during the process of evaporating the milk. Each infant was given 8 to 17 ounces of the evaporated milk daily diluted with water according to the formula; the cod-liver oil concentrate included in the milk supplied from 228 to 485 units of vitamin D and 1,142 to 2,428 units of vitamin A. The milk was well taken and well tolerated. The sole source of vitamin C in these feeding experiments was canned pineapple juice, 1 to 2 ounces daily. These infants were under observation for four months to thirteen and a half months; all were in the susceptible age period for rickets. All made normal gains in weight and length. None developed any clinical, chemical or roentgenographic signs of rickets or scurvy during the period of observation. Five infants who showed questionable clinical signs of rickets, chiefly craniotabes, early in the period became normal and remained so. It is evident that the vitamin D provided by the cod-liver oil concentrate used in these experiments provided adequate protection against rickets, while the routine administration of cod-liver oil is greatly simplified by including it in the milk.

Lactic Acid Milk in the Prevention of Summer Diarrhea

L. A. Scheuer (*Journal of Pediatrics*, 7:468-471, October, 1935) states that the incidence and the mortality rate from summer diarrhea among infants at the New York Foundling Hospital remained high up to 1931, in spite of the fact that there was an adequate supply of clean milk with a low bacterial count. In the summer months of 1931 to 1934, 403 infants were given a powdered lactic acid milk instead of the customary whole milk mixtures. In a dilution of 1 to 8 in water the powder gave the percentage composition of whole milk with 0.3 per cent lactic acid added. The carbohydrate added was limited so that the total carbohydrate content of the mixture did not exceed 7 per cent; the caloric value was kept under 50 calories per pound of body weight. All the infants given this mixture were under six months of age, and generally suffered from malnutrition. On the lactic acid milk diet, none developed summer diarrhea, none became

marasmic or died. In the hospital there were only 3 cases of summer diarrhea in 1931 and 1932, and none in 1933 and 1934. These 3 cases developed in infants who had been given whole milk mixtures.

Blood Counts of Newborn Infants in Relation to Icterus Neonatorum

L. C. Martin and S. M. Evans (*Archives of Diseases in Childhood*, 10:355-362, October, 1935) report a study of the red cell count in 20 infants within two hours after delivery, and for the first five days of life. Of these 20 infants, 9 developed icterus neonatorum. It was found that the average red cell count at birth was higher in the infants that developed icterus than in those who did not. In the first five days of life also, the infants developing icterus neonatorum had a higher average red cell count than the average for those who did not develop icterus or the total average for both groups. All the red cell counts showed a downward tendency in this period. In some infants developing icterus, the red cell count reached a peak on the second or third day, and then fell to a lower level. But it was found to be impossible to deduce from any individual five day erythrocyte curve whether the infant had developed icterus neonatorum or not. From these findings the authors conclude that icterus neonatorum is due to a "temporary lack of balance" between erythrocyte production and erythrocyte destruction. An initial polycythemia occurs in all infants, as the average red cell count for the entire group at birth was 5,512,000, and the average hemoglobin 118 per cent. Ten of the infants were delivered by Cesarean section at full term; this group showed a slightly lower average erythrocyte count and hemoglobin than the naturally born children.

Splenomegaly In Children with Early Hematemesis

R. H. Smith and S. Farber (*Journal of Pediatrics*, 7:585-608, November, 1935) reports 15 cases of splenomegaly with early hematemesis in children; these cases show definite characteristics that distinguish them from Banti's disease; and warrant their classification as a distinct disease entity. These characteristics are: Splenomegaly; early hematemesis accompanied by a decrease in the size of the spleen; increase in the size of the spleen when blood loss is restored; normal blood count except immediately after hemorrhage when there is a secondary anemia; no development of cirrhosis of the liver and ascites in the late stages. Of the 15 cases reported 7 had died at the time this report was prepared; the eighth death occurred before publication of the report from extensive thromboses, intestinal perforation and hemorrhage; splenectomy had been done in this case, but there were recurrences of hemorrhage after operation. In the other fatal cases, death was due to recurrent uncontrollable hemorrhage except in one instance in which death was due to postoperative pneumonia, possibly embolic in origin; in one case the hemorrhage was complicated by extensive thromboses. In 3 of these fatal cases splenectomy had not been done. Of the 7 patients living, all but one have had splenectomy done; this patient is recovering from the second hematemesis and will have the operation done as soon as possible. One was operated only three months ago; one patient has been well for five years; one has had multiple attacks of thromboses, but no hemorrhage. The other 3 have all had recurrences of hemorrhage. In one of these cases in which the vessels in the gastrohepatic omentum were ligated a year after splenectomy, there was one slight hemorrhage two years later, but no further recurrence for three years. In the patient operated three months ago, ligation of the vessels was also done. The authors conclude that the primary pathologic lesion in these cases is portal or splenic vein obstruction due, in most cases, to thrombophlebitis secondary to infection in some other part of the body. As splenectomy alone does not prevent recurrence of hemorrhage, it is suggested that ligation of vessels going to the stomach and esophagus "offers a further means of treatment with the possibility of a greater success." A high platelet count prior to operation in these cases indicates danger of postopera-

tive thrombosis; the count may be so high as to constitute a contra-indication to splenectomy.

Whooping-Cough in Tuberculous Children

J. I. Hershey and F. Ward (*American Review of Tuberculosis*, 32:612-615, November, 1935) report a study of an epidemic of whooping-cough among tuberculous children in the Eagleville (Pennsylvania) Sanatorium. In each case of whooping-cough diagnosis was confirmed by coughplate cultures. A vaccine prepared from the strain of *B. pertussis* isolated from the first cases of the disease was used both prophylactically and for treatment. Eleven children and 14 nurses and attendants were given prophylactic treatment; 2 of the children subsequently developed whooping-cough, which ran a mild course in both instances. Nine of the children in the Sanatorium developed whooping-cough during the epidemic; 7 of these had tracheobronchial tuberculosis; one was under observation with a positive Mantoux reaction; and one was "a contact case" with a negative Mantoux reaction. The specific vaccine was given on alternate days in these cases, beginning with 250 million organisms and gradually increasing to three billion; this caused only slight or moderate local reactions. The usual sedative and symptomatic treatment was also used. In all of the cases the symptoms were "definitely ameliorated" by this treatment, and in 2 cases the disease was "practically aborted." Clinically there was no evidence of any ill effects of the whooping-cough on the tuberculosis in these cases; most of the children appeared rather to benefit from the enforced bed rest. Roentgenographically 6 of the 9 children showed only slight generalized accentuation of the trunk markings of the lungs after the attack of whooping-cough; the other 3 showed no changes. These findings, the authors note, are in marked contrast to the generally accepted view that whooping-cough "is a very grave complication of latent or active pulmonary tuberculosis."

Rheumatic Cardiac Disease in Children

L. M. Taran (*American Journal of Diseases of Children*, 50:840-852, October, 1935) presents a study of 169 children admitted to the Children's Cardiac Clinic of the Kings County Hospital, Brooklyn, N. Y. In a group with no history of rheumatism but cardiac symptoms, 75 per cent showed clinical evidence of valvular disease. In children with a history of chorea, 92 per cent had definite valvular involvement, and in children with a history of rheumatic fever, 95 per cent had valvular involvement. There was diminished cardiac reserve in more than half of the children with a history of chorea and in 75 per cent of those who had had rheumatic fever. All the children with a history of acute rheumatic arthritis had valvular disease and more than four-fifths of this group had diminished cardiac reserve. Positive roentgenological findings of cardiac enlargement paralleled clinical findings of valvular involvement and diminished cardiac reserve.

Placarding Infectious Diseases

The commissioner of health of the village of White Fish Bay, Wis., Edwin B. Gute, has designed an interesting new type of placard for the infectious diseases. For such infectious conditions as mumps, German measles, chickenpox, whooping cough and measles, placards have been developed which include not only a sign to be placed on the front and back doors of the house, but also a card to be hung in the home containing information and advice to the members of the family on each of the conditions concerned. The cards describe not only the early signs and symptoms, the incubation period and the period of communicability, but also the regulations regarding attendance at school and the conduct of the family during the period of illness. In addition, the card includes care of the sickroom, disinfection, and general information to the parents concerning the disease. The placard, which was recently exhibited at the meeting of the American Public Health Association, has attracted wide general attention and is likely to be adopted in other parts of the country.—*Jour. A. M. A.*, Nov. 16, 1935.

Editorials

Academic Freedom In Medical Schools

The present liberal spirit in our medical schools is part of the liberal spirit of the profession at large and in the medical societies. This liberal spirit has reached its present point because of the *special* threat to medicine, which has been *singled out* for regimentation. A profession *selected* for socialization, alone among American groups, has at last cast off the stifling hand of babbittry and faced untrammelled those who would smother it by another technic. We have been *compelled* to think intensively along certain lines, ending by defying both Montague and Capulet.

Favoring this change has been the emergence of a student body imbued with the spirit of the new day and, by reason of certain trends and shifts in the social strata, possessed of keener intellectual powers and wider interests—whatever else their shortcomings—than the old type American youth.

So "hot" subjects receive free presentation and discussion today in academic halls.

It is of no particular consequence what the personal slant of the teacher happens to be. He is likely to be a blend, in part a sop to waning shades of respectability of a sort and in part a parlor pink, thus not carrying much weight nor hazarding martyrdom, however much coveted. In the days of Franklin Giddings, at Columbia University, there was efficient teaching without the betrayal of partisanship on the part of the Professor. It would have been a matter of good taste and good pedagogy as well as of reactionary caution in those days not to betray one's self. Today, the medical teacher's taking of sides means nothing to his pupils, who are likely to be more intelligent, basically, than the teacher himself and derived from far more liberal intellectual environments, and who are only excelled by him in a putative scholarship.

The old smug philistine and bourgeois fear of enlightenment for youth is wholly without meaning today, so far as medical students are concerned. The age of innocence, thank heaven, has passed for them.

The student can now get the right perspective—grasp the meaning of the medical status quo because he is aware of the medical social relations of the past and the present; he sees medicine as a social force itself and also as a recipient of the influence of social trends throughout the ages; rationalization, evaluation and personal adjustment follow.

Here, then, is no cultural lag; undergraduates are in a position to examine all ideas and personalities and then make their own decisions; such graduates should be civilized men; the safety of society would be assured if such a free atmosphere could prevail everywhere.

What is truth? Who is teaching unalloyed truth?

Who is teaching the whole truth and nothing but the truth? We have recovered from the lunacy that drove Vesalius from Padua, that sought to drive Harvey from his London post, that denounced Oliver Wendell Holmes and Marion Sims as quacks, and that burned Servetus at the stake.

So the teacher whose partisanship, once upon a time would have exposed him to the rotarian vengeance of a backward community, may today be a conservative, harmless, even reactionary force in a *milieu* which tends to surpass him in constructive and progressive thought. He may bore, rather than corrupt, the student body, even as he may bore his professional colleagues at large. This will be the more true where he links personally with socio-economic set-ups that he inveighs against while smugly enjoying their fruits, where he lives aloof from the sweat and blood of the trenches, and where he is unable to divest himself of telltale ear-marks indicative of his clan's religious ethics, despite which obvious patterns he asks bored audiences to accept him as a prophet of the new day while speaking dualistically in the preposterous voice and person and with the pulpit technic of the effete preacher of yesteryear.

We are speaking strictly of medical schools, not of the places where Dwight Morrows consent to the removal of Alexander Meiklejohns.

Nature Gives an Object Lesson for the Advocates of Socialized Medicine

Nature is the great teacher—she is always ready to teach those who have the ability and will to learn. To the advocates of socialism she gives an object lesson in the case of the bees.

Nature adopted in the beginning the law of evolution to govern the development of living things; but she was not above experimenting. She experimented with socialism. She tried it on the bees and some other insects. But she did not continue with it. She left those insects to their communistic life (and to serve as an example), and kept on with her evolutionary plan.

Why did nature not continue along the socialistic line? Why did she not repeal the evolutionary clause in her constitution and substitute for it the socialistic dogma? Evidently, because she found that the latter was not good.

Consider the case of the bees. They are an extreme example of socialized life; they are absolute communists. What do they get out of it? What do they lose by it?

They get a high degree of efficiency on a fixed but low level of existence. Most of them are drones; and those who are not drones have definite, prescribed duties which fill their lives. They work, are fed, and carry on their race on a monotonous, changeless plane of existence. Their evolutionary

inheritance, their chance to improve, they have lost.

This is the essential fault of the socialistic dogma—it checks further progress, it makes for fixation of status, or for degeneration.

In this connection, however, it must be conceded that amendments may be made to the law of evolution to secure certain advantages of cooperation; but no such amendments can be made which nullify the law of evolution—that law remains supreme.

Man has advanced greatly under the evolutionary law. He has sometimes become elevated in his own conceit, so as to think that he knows what is good for himself better than nature does. The socialistic error is one into which at times and places he has shown a tendency to fall. Plato did so.

Some have been led by the lure of standardized efficiency into the error that medicine should be socialized. They do not realize how low would be the level of the standardization thus produced, relative to what it could be. They do not realize that socialization would not only lower the standardizable element in medicine, but would inhibit medical progress.

E. E. C.

Death Control Versus Birth Control

If anyone were to propose the elimination of excess population by inviting elderly persons to enter lethal gas chambers the public would be shocked. But young lives are snuffed out before birth on a large scale. Even the ruthless Russian government, however, hasn't proposed substituting the aged for the young.

In this country in 1930 there were 4,155,495 people over sixty years of age holding jobs (United States Census Bureau).

In order to gear the population to the industrial machine certain groups believe that an intensive lowering of the birth rate must be brought about, since in their view such an adjustment is perhaps the most important of society's tasks. They rely fatuously upon contraception, with a minority advocating the legalization of abortion, which would probably double the very considerable number now performed.

This scaling down of the birth rate will in time greatly lower the number of consumers in the country. If this is the aim could not the same end be brought about more directly and expeditiously by eliminating the aged? And would not the adjustment of jobs to workers be rapidly achieved?

Will it yet be alleged by apologists and special pleaders that upon sentimental grounds alone the salvaging of young life as against the conservation of senility should make a strong appeal?

Will it be pleaded that such a program would in the course of the next generation give us a younger and more vital world, and not the society prophesied by Dublin as containing an undue number of old people, with consequent dulling of social life at all points?

The displacement of men by machines is proceeding apace, and contraception, unless supplemented by more intensive abortion and even by infanticide, will not achieve a balance between jobs and workers. Which technic, death control or birth control,

would better serve the purpose of the industrial adjusters?

Would people who are not shocked by the present contraception plus abortion system be horrified at first by the idea of "laying off" the babies, for awhile at least, and "going after" other game?

Why Townsend pensions, or any pensions at all? Will this question yet be asked by birth controllers turned death controllers?

Will death controllers yet ask why a single unit of the baby crop should be ploughed under so long as any arteriosclerotic ruin remains alive, defrauding alike nature, the country's exchequer and the grave?

Miscellany

The New Deal, or Shuffle

Why the Old Time Doctor Passed—"The Forces of Reaction"

IN a recent editorial in the *Saturday Evening Post*, under the influence of an entirely different cosmic urge than the one to which we now address ourselves, there are listed some calories and vitamins for political diets that may be here hashed-up and prescribed under a medical assumption of, at least, food for thought.

"Reaction proposes to put the whole liberal tradition at bay and to bring down the greatest living exponent." (For the Medical—politico-economic—view here, the exponent might be, be it said, the old-time doctor.) . . . "If those who oppose the New Deal" (—and if the scientific Medicine new dealers, we interpolate) "are indeed reactionaries, and are engaged in defeating the real liberal tradition, then the sooner such a serious fact is established the better." . . . "Mere repetition, however, does not make an assertion true, nor are the self-proclaimed virtues of a (certain) group necessarily to be accepted at face value just because that particular group happens to be in power at the moment" (—and who say, "the old-time doctor has passed!").

"In the first place it is a question of very real import just how much the far-flung activities of the New Deal" (—in Medicine, science, uplift, State Medicine) "have been motivated by a purely altruistic devotion" (and such as, say, a desire to keep humanism in Medicine) . . . "to 'the liberal tradition', and how much by an eager desire for continued political success" . . . "All these considerations make it seem unlikely that 'the liberal tradition' is the sole thought of the New Deal." (—in the New Medical Science and State Medicine!)

"In the second place, is there not danger of mistaking the temperament," . . . (in Medicine, mistaking science and State Control of Medicine as a care for the sick, in body and soul) "keeping things constantly stirred up," (—debunking all the old traditions) "perpetual action," (—of the if-it's new-

it's-better) "always doing new things before the older ones have worked out," (—but with the great itch for front page spread, name and picture in the paper, already transpired!) "but there is no necessary connection between them and 'liberalism'" (My! we are all momentumed-up with the *status quo!*). "One cannot safely legislate beyond the capacity of experienced administration to execute" and Medicine cannot assimilate faster than it can digest the new vitamines and calories of science; and must eliminate the undigestible—the sawdust—the "Excelsior!"

"It is the height of presumption for the New Dealers to arrogate to themselves the description of 'liberal' in view of their attitude toward the Constitution and the Supreme Court." (Science, cults and upifters, Foundations and New Deal prophets—profits have become arrogant, too, with Medicine's Constitution, inheritance, traditions and Hippocratic birthright, and little things like that.) "For these are the very cornerstone and bulwark of liberal institutions. To undermine or attack them is the essence of reaction . . . to trample upon individual freedom and responsibility, to introduce coercion into the lives of the people and to substitute the authoritarian state" (—or State Medicine) "for the present form." . . . "There are dangerous forces of reaction at work in this country," (—and in Medicine!—The Milbank Foundation?) "but they are made up of those who would destroy the American form of Government," (—and the old country doctor and carry on their Milk Control in Detroit) "not those who would preserve it." (My, does my chest feel lighter!)

—HARRY NELSON JENNITT, M.D.
Kansas City, Missouri

Nuts to You



"Please notice that my mental cases, after my re-educating treatment, do not fit into civil life, but on the other hand, make excellent soldiers."

Soro in *Marianne*, Paris.

Iriology

Even after the Mayos, the Criles and the Johns Hopkins galaxy have failed, there is still hope. The following message was recently called to our attention:

Are You Cracking?

Men and women crack suddenly just as steel or iron does, when the strain is too great. Steel cracks because there is some hidden weakness within its structure. Men and women crack because there is some weak organ that does not reveal serious conditions until too late.

The man who watches his food and replenishes his organs with the organic salts that keeps his body alkaline and electrifies every cell, hardly ever cracks. It is the person who thinks he is in perfect health and who ridicules right eating, who finds himself suddenly in the hospital. There are various types of human beings, just as there are different makes of automobiles. Some individuals should use lemons or grapefruit; others should not use salads. Some individuals should drink everything hot; others need cold beverages and coffee to stimulate them.

Two remarkable lectures will be delivered on this subject by Levine, the world's leading Iriologist. People have called on him after they have been to the Mayos, Johns Hopkins and the Crile Clinic, in reference to his dietetic discoveries.

Demonstration at the McAlpin Hotel

Monday, Nov. 18th, 8:15 P.M.—Death and Its Causes.

Tuesday, Nov. 19th, 8:15 P.M.—The Radio Wonders of Human Body.

Free clinic for children.

Care in Traumatic Cases

Exercise especial care in wounds of the hand; next be careful in hair-bearing zones.

—JOHN J. MOORHEAD, *Southern Surgery*.

Historical

"My wife always gets historical when I stay out late at night."

"Hysterical, you mean."

"No, historical. She digs up all my past."

—Exchange.



ASSOCIATED PHYSICIANS OF LONG ISLAND

The Coming January Meeting

38TH ANNUAL MEETING, SATURDAY, JANUARY 25TH, 1935

The Scientific Session will be held at the Methodist Episcopal Hospital, Sixth Street, Seventh to Eighth Avenues, Brooklyn, and will be provided by members of the medical staff as follows:

11:00 A.M. to 1:00 P.M.—Operative Clinics by Dr. Henry F. Graham and Staff and Dr. Harold K. Bell and Staff.

1:30 P.M.—Luncheon—Guests of the Hospital.

2:30 P.M.—Inspection of the new X-Ray Department.

3:00 P.M.—Scientific Program.

1. Practical Dietary Principles by Dr. Frank B. Cross.
2. Report of Case of Tumor of the Stomach, Ovaries and Breast by Dr. Henry T. Hagstrom.
3. A Consideration of the Present Methods of Treatment of Poliomyelitis by Dr. Kenneth D. Nichol.
4. Preliminary Report on the Treatment of Atrophic Arthritis by Dr. Donald E. McKenna.

Business Meeting—Election of officers for 1936.

6:30 P.M.—Dinner at the Hotel Granada, Lafayette Avenue and Ashland Place, Brooklyn.

The Entertainment Committee promises an interesting after dinner speaker.

BOOKS RECEIVED

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

AN INTRODUCTION TO PUBLIC HEALTH. By Harry S. Mustard, M.D. New York, The Macmillan Company, [c. 1935]. 250 pages. 8vo. Cloth, \$2.50.

THE MEDICAL VOODOO. By Annie Riley Hale. New York, Gotham House, [c. 1935]. 338 pages. 8vo. Cloth, \$2.50.

RUSSELL A. HIBBS, Pioneer in Orthopedic Surgery, 1869-1932. By George M. Goodwin. New York, Columbia University Press, [c. 1935]. 136 pages, illustrated. 8vo. Cloth, \$2.00.

DIE HAUT UND GESCHLECHTSKRANKHEITEN. By Prof. Dr. Leopold Arzt and Prof. Dr. Karl Zieler. Lieferung 26/27. Berlin, Urban & Schwarzenberg, [c. 1935]. 4to, illustrated. Paper, RM 28.50.

THE BACTERIOLOGY OF TYPHOID, SALMONELLA, AND DYSENTERY INFECTIONS AND CARRIER STATES. By Leon C. Havens, M.D. Edited by Kenneth F. Maxcy, M.D. New York, The Commonwealth Fund, [c. 1935]. 158 pages. 8vo. Cloth, \$1.75.

EAT, DRINK AND BE WARY. By F. J. Schlink. New York, Covici Friede, [c. 1935]. 322 pages. 8vo. Cloth, \$2.00.

MODERN OFFICE AND GENERAL PRACTICE. A Handbook of Practical Medicine. By Deane R. Brengle, M.D. Kingsport, Southern Publishers, Inc., [c. 1935]. 320 pages. 12mo. Cloth, \$3.25.

RADIUM TREATMENT OF SKIN DISEASES, NEW GROWTHS, DISEASES OF THE EYES AND TONSILS. By Francis H. Williams, M.D. Boston, The Stratford Company, [c. 1935]. 118 pages, illustrated. 12mo. Cloth, \$2.00.

GLANDS AND EFFICIENT BEHAVIOR. By Florence Mateer, Ph.D. New York, D. Appleton-Century Company, [c. 1935]. 243 pages. 8vo. Cloth, \$2.50.

GROWTH A STUDY OF JOHNNY AND JIMMY. By Myrtle B. McGraw, Ph.D. New York, D. Appleton-Century Company, [c. 1935]. 319 pages, illustrated. 8vo. Cloth, \$3.50.

NERVOUS AND MENTAL DISEASES. A simplified and comprehensive presentation of nervous diseases and insanity. By Bernard S. Maloy, M.D. Indianapolis, Bobbs-Merrill Company, [c. 1935]. 551 pages, illustrated. 4to. Cloth, \$7.50.

STREAMLINE FOR HEALTH. By Philip B. Hawk. New York, Harper & Brothers, [c. 1935]. 186 pages, illustrated. 8vo. Cloth, \$2.50.

THE BIOCHEMISTRY OF THE LIPIDS. By Henry B. Bull. Minneapolis, Burgess Publishing Company, [c. 1935]. 127 pages, illustrated. 4to. Fabrikoid, \$3.25.

PEDIATRIC TREATMENT. A Manual of the Treatment of the Diseases of Infants and Children Designed as a Reference Work Especially for the General Practitioner and Physicians Entering the Field of Pediatrics. By Philip S. Potter, M.D. New York, The Macmillan Company, [c. 1935]. 578 pages. 8vo. Cloth, \$5.00.

A B C OF THE ENDOCRINES. By Jennie Gregory, M.S. Baltimore, Williams & Wilkins Company, [c. 1935]. 126 pages, illustrated. 4to. Cloth, \$3.00.

DEMONSTRATIONS OF PHYSICAL SIGNS IN CLINICAL SURGERY. By Hamilton Bailey, F.R.C.S. Fifth edition. Baltimore, William Wood & Company, [c. 1935]. 287 pages, illustrated. 8vo. Cloth, \$6.50.

LOCALIZED RAREFYING CONDITIONS OF BONE as exemplified by Legg Perthes' Disease, Osgood-Schlatter's disease, Kummell's disease and related conditions. By E. S. J. King, M.D. Baltimore, William Wood & Company, [c. 1935]. 400 pages, illustrated. 8vo. Cloth, \$7.50.

THE RADIOLOGY OF BONES AND JOINTS. By James F. Brailsford, M.D. Second edition. Baltimore, William Wood & Company, [c. 1935]. 571 pages, illustrated. 4to. Cloth, \$9.00.

INTERNATIONAL CLINICS. A Quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, etc. Volume 4, 45th Series, 1935. Edited by Louis Hamman, M.D. Philadelphia, J. B. Lippincott Company, [c. 1935]. 331 pages, illustrated. 8vo. Cloth, \$3.00.

THE SPECIAL PROCEDURES IN DIAGNOSIS AND TREATMENT. An Outline for Their Understanding and Performance. By Don Carlos Hines, M.D. Stanford University, Stanford University Press, [c. 1935]. 66 pages. 12mo. Paper, \$1.00.

CHEMISTRY IN THERAPEUTICS. By Walter B. Guy, M.D. Philadelphia, W. Roy Huntsman, [c. 1935]. 182 pages. 8vo. Cloth, \$3.00.

THE INTERACTION OF THE LYMPH AND BLOOD GLANDS. By D. Montgomerie Paton, L.R.C.P. Baltimore, William Wood & Company, [c. 1935]. 146 pages. 12mo. Cloth, \$2.50.

FOOD VALUES AT A GLANCE AND HOW TO PLAN A HEALTHY DIET. By Violet G. Plummer. New York, Longmans, Green & Company, [c. 1935]. 94 pages. 12mo. Cloth, \$1.50.

ESSENTIALS OF PSYCHOPATHOLOGY. By George W. Henry. Baltimore, William Wood & Company, [c. 1935]. 312 pages. 8vo. Cloth, \$4.00.

NEW PATHWAYS FOR CHILDREN WITH CEREBRAL PALSY. By Gladys G. Rogers and Leah C. Thomas. New York, The Macmillan Company, [c. 1935]. 167 pages, illustrated. 8vo. Cloth, \$2.50.

THE MEDICAL TREATMENT OF GALLBLADDER DISEASE. By Martin E. Rehfuss, M.D. and Guy M. Nelson, M.D. Philadelphia, W. B. Saunders Company, [c. 1935]. 465 pages, illustrated. 8vo. Cloth, \$5.50.

THE CEREBROSPINAL FLUID AND ITS RELATION TO THE BLOOD: A PHYSIOLOGICAL AND CLINICAL STUDY. By Solomon Katzenelbogen, M.D. Baltimore, Johns Hopkins Press, [c. 1935]. 468 pages. 8vo. Cloth, \$5.00.

News and Notes

The Sixth International Congress of Physical Medicine

Arrangements for London Meeting, May 12th-16th, 1936

The Sixth International Congress of Physical Medicine will meet in London in May next, from the 12th to the 16th of the month. This will be the first occasion upon which the Congress has met in Great Britain. The decision to meet in this country recognizes the high standing and achievements of treatment by physical methods in Great Britain and Ireland. Foreign members have expressed their cordial approval of this change from a Continental venue and their intention to assist by their presence and active participation in the discussions.

Lord Horder has accepted the office of President of the British Section of the Congress. Mr. Ernest A. Eblewhite, LL. D., is Hon. Treasurer; Sir Robert Stanton Woods, Chairman of the Executive Committee; Sir Henry Gauvain, Chairman of the General Committee; Dr. Albert Eidenow, Hon. Secretary; and Dr. Alexander Cawdias, Hon. Assistant Secretary.

Lord Horder will be supported by an influential body of Vice-Presidents and members of the Executive and General Committees of the British Branch, whose names are a guarantee of the widespread interest which is already being taken in the Congress by leading physiotherapists in this country.

Medical men who wish to attend the Congress are requested to communicate with the Hon. Secretary, Dr. Albert Eidenow, 4, Upper Wimpole Street, London, W. 1. The Congress fee has been fixed at two guineas for each member.

Relation of Leukemia of Animals to Leukemia of Man

Jacob Furth, Henry W. Ferris and Paul Reznikoff, New York (Journal A. M. A., Dec. 7, 1935), review some of the contributions to the knowledge of leukemia that have come from experimental studies in animals and attempt to correlate them with the human disease. Leukemia of man is essentially the same disease as leukemia of mice. Both the acute and the chronic forms, lymphoid as well as myeloid, are neoplastic diseases. The immature blood cells in leukemia are malignant cells, which may form tumors or diffuse infiltrations and possess characteristics of their own. Studies of leukemia of the mouse indicate that leukemia, like cancer, is of multiple etiology; its development and manifestations are dependent on intrinsic (genetic) and extrinsic factors. An analysis of these factors in the mouse and their rôle in the human disease requires further study.

MEDICAL BOOK NEWS

Edited by TASKER HOWARD, M.D.

All books for review and communications concerning Book News should be addressed to the Editor of this department
1313 Bedford Avenue, Brooklyn, New York

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CLASSICAL PARAGRAPH



"The blood conducted to the heart by the veins receives there its last perfection, and this perfection acquired, it is carried by the arteries to the whole body."

Cesalpinus: *De plantis*, lib. ii., cap. ii., p. 3, Florence, 1583.

On Physiochemical Psychology

PACEKERS IN RELATION TO ASPECTS OF BEHAVIOR. By Hudson Hoagland. New York, The Macmillan Company, [c. 1935]. 138 pages, illustrated. 8vo. Cloth, \$3.00.

This monograph is the first of a series in experimental biology dealing with physiochemical master reactions which act as pacemakers in determining behavioristic reactions. The various effects of temperature, the inhibitory role of potassium on peripheral excitable tissues and a consideration of the nature of inhibition are among the subjects studied.

This work is highly technical and should be read only by those particularly interested in the field.

STANLEY S. LAMM.

New Textbook On Rhinology

DISEASES OF THE NOSE AND THROAT FOR PRACTITIONERS AND STUDENTS. By Charles J. Imperatori, M.D., and Herman J. Burman, M.D. Philadelphia, J. B. Lippincott Company, [c. 1935]. 723 pages, illustrated. 8vo. Cloth, \$7.00.

This book is worth your examination and to most of us will prove useful as a reference. Its most satisfactory feature is the presentation of a region or part completely from its essential anatomy through its various diseases.

Thus, it is an excellent book for reference and guidance for the rhino-laryngologist, and also for the student and the intern in this field, and also for the general practitioner. The preface states that the book covers the essentials of the course given in this department of the New York Post-Graduate Medical School of Columbia University.

The form is good. Each chapter is prefaced by an outline of contents and this feature, with the bolder typed headings and different paragraph arrangement, make quick reference easy. Subjects are briefly but well described and almost every clinical entity is mentioned and handled as befits its importance. Diagnosis, treatment, pathology, etiology, and prophylaxis are described concisely, but not

too briefly. Anatomic considerations are prominently presented.

Illustrations are numerous and include microphotographs, anatomic and schematic drawings, and photographs of x-ray negatives, patients and anatomic material, as well as apparatus and armamentaria. Operations are described in a simple way and elaborate details of personal preferences in procedure are generally omitted.

The early chapters describe necessary and modern equipment and methods of examination.

A chapter on cocaine, its uses and toxicity, conveys the impression very definitely that if used as described, it is the product of choice of the authors and has proven safe in their hands. Authentic and prevailing differences with this opinion, are not stated, and aside from procaine solution for infiltration, other preparations for local anesthesia are not discussed.

As would be expected from the authorship, the sections on the larynx, bronchi, and esophagus, as well as all oral endoscopic examinations, and surgery of these parts, are well set forth. Even gastroscopy and duodenoscopy, an art little known to most of the profession, are interestingly described.

The chapter on rhinoplastic surgery sounds simpler than it should and hardly implies the technical difficulties in this field. But the chapters on x-ray examinations of the sinuses, and x-ray and radium therapy are ably written by eminent specialists in these fields. Laboratory methods relating to the specialty, as well as pathological data, have been specially edited and supervised.

CHARLES R. WEETH.

The Real American Physician

THE MEDICINE-MAN OF THE AMERICAN INDIAN AND HIS CULTURAL BACKGROUND. By William T. Corlett, M.D. Springfield, Charles C. Thomas, [c. 1935]. 369 pages, illustrated. 8vo. Cloth, \$5.00.

In this book, Dr. Corlett makes an exhaustive study of the medicine-men of the numerous Indian tribes which

once peopled the Western Hemisphere. There are other sections which deal with the origin and cultural background of the American Indian, childbirth from prehistoric times to the present and the foods and *materia medica* of the aborigines.

The study opens with a minute description of the different tribes of the American Indian, their traits, customs, modes of living, food supplies, prevalent crafts and industries and their defenses against invaders. With respect to the subject of Indian diseases, the author bases most of his conclusions on evidence furnished by skeletal remains of the pre-Columbian period. He emphasizes the fact that no bony changes were found which might have indicated the prevalence of cancer, syphilis and tuberculosis among the natives. Syphilis was not brought back from the New World by Columbus and his sailors. The probability is that tuberculosis did not exist as an endemic disease among the aborigines of the Western Hemisphere before the advent of Columbus, and that European invasion played havoc with the natives by introducing such contagious diseases as measles, smallpox, scarlet fever, syphilis and tuberculosis. Evidences of trephination were discovered in Peru, showing that the ancient inhabitants of that country possessed some knowledge of surgery.

Every tribe had its own healers. And their methods of treatment varied. The medicine-man depended upon his power to inspire faith on the part of the patient by the use of weird incantations and grotesque gesticulations and some common sense in his treatment of the disease.

Childbearing, even as it is performed today, is a much simpler procedure among the Indians than it is among more civilized peoples. Midwives or female relatives are generally in attendance. The infant mortality rate runs as high as forty per cent. If any malposition or other complication is encountered, it not infrequently proves fatal to both mother and child.

The author is to be complimented for the laborious and painstaking care with which this treatise has been prepared. It is very well written and worth reading.

WILLIAM RACHLIN.

New Edition of *Elmer & Rose*

PHYSICAL DIAGNOSIS. By Warren P. Elmer, M.D., and W. D. Rose, M.D. Seventh edition. St. Louis, C. V. Mosby Company, [c. 1935]. 919 pages, illustrated. 8vo. Cloth, \$8.00.

The general form of this edition has not been changed. In Part I is discussed the technic of physical examination of the entire body with a description of normal and abnormal findings. There is a section on radiology by Dr. Sherwood Moore and one on electrocardiography by Dr. Drew Luten. This latter section has been completely revised and is quite full for a book on general diagnosis. The records usually considered to denote right axis deviation, Luten regards as indicating left and the usual left, as right. This is somewhat confusing but he reminds the reader that this is the reverse of the reading in general use.

It is a book of considerable size, well illustrated and has a specially resistant binding of extra strength. It is recognized as one of the standard works on the subject.

W. E. MCCOLLOM.

Clinic In Crime

THE INDIVIDUAL CRIMINAL. By Ben Karpman, M.D. Washington, Nervous & Mental Disease Publishing Company [c. 1935]. 317 pages. 8vo. Cloth, \$4.50.

Two years ago Dr. Karpman published an enormous collection of psychoanalytic minutiae obtained from a few criminals confined in the St. Elizabeth Hospital. This was truly a source reference on the psychoanalytic or dynamic approach to the problem of crime. In the present volume, Dr. Karpman takes up synopses of such individual cases and adds interpretational material.

This is of great importance for several reasons and should not be overlooked, neither by the sociological nor the medical world. It has hitherto been the custom to parade pat psychoanalytical references on the dynamics of crime as if they were actually derived from sound empirical experience. This fault hurt both the analysts and the problem. Karpman is fortunately not a prepossessed analyst, but an experienced psychiatrist. As a result he is able to deliver a wholly refreshing and reliable

assessment of the entire question of the criminal as well as crime.

While the earlier volume will interest only analysts, perhaps the present volume is one of the most readable and absorbing contributions to appear in a generation. Any physician can understand the psycho-dynamic language and any criminologist will glean a novel slant on this grave social cancer. There is also a comprehensive index as well as a glossary of criminal slang.

SAM PARKER.

Diet Directions for the Layman

DIET AND LIKE IT. By Mabel E. Baldwin, Ph.D. New York, D. Appleton-Century Company, [c. 1935]. 230 pages, illustrated. 12mo. Cloth, \$2.50.

A true effort has been made by the author to live up to the title of the work by liberal and varied menus. The book is especially meant for the layman who desires to lose weight and accomplish this with safety. The first half of the text presents in orderly fashion two series of menus, one for an individual whose height is less than five feet six inches, the other for an individual five feet six inches or more. Each series contains two breakfasts, five lunches, and fifteen dinners, certainly sufficient variation for anyone. The author has not burdened the subject with unnecessary descriptive or theoretical matter. The latter half of the book describes in simple readable style the principles involved in weight-reduction by diet. Especially pleasing to the critic is the fact that Author Baldwin has made her scheme of dieting fool-proof in that vitamins, minerals, "protective foods," and proteins are adequately covered.

GEORGE E. ANDERSON.

Psychopathology of Childhood

CHILD PSYCHIATRY. By Leo Kanner, M.D. Springfield, Charles C. Thomas, [c. 1935]. 527 pages. 4to. Cloth, \$6.00.

This book is the first text of child psychiatry in the English language. It is divided into two parts, the first dealing with general principles of an objective psychobiology and psychopathology of childhood and the second with more specific clinical pictures. No special school of thought is followed, but the contributions of various workers as Freud, Adler, Watson and Jaensch are all utilized. Stress is laid on viewing the child as a biological unit. The relation of the child to his environment is also emphasized. There are chapters on the complaint factor, psychiatric examination and diagnosis, including recognition of the somatic, intelligence, emotional, sex, constitutional and environmental factors. Therapy is taken up in broad terms and in the latter part of the book in relation to specific clinical entities.

No summary could adequately describe the manifold details in the book. It is recommended particularly for pediatricians and psychiatrists, but will be of use to all practitioners.

STANLEY S. LAMM.

Mostly About Operations in the Puerperium

PUERPERAL GYNECOLOGY. By J. L. Bubis, M.D. Baltimore, William Wood & Company, [c. 1935]. 199 pages, illustrated. 8vo. Cloth \$3.50.

Most gynecologists are familiar with the work of Bubis, who has been a long time advocating routine repair of old as well as new lacerations immediately or shortly after childbirth. Cystocele, rectocele, Bartholin cysts, hemorrhoids and rectovaginal fistulas are operated upon often immediately after expulsion of the placenta. Old lacerations of the cervix are repaired, and the cervix is cauterized or amputated. The author has performed a great many plastic repairs in the puerperium with very satisfactory results. His technique is described and many tables are included in the book. Much space however is devoted to prenatal and postnatal care and the delivery itself. P. Brooke Bland in an interesting foreword says he is in hearty accord with the methods advocated and practiced by the author of this book. The reviewer has had no experience whatever with this type of puerperal gynecology which at least appears radical.

CHARLES A. GORDON.

Dietetics

FOOD AND BEVERAGE ANALYSES. By Milton A. Bridges, M.D. Philadelphia, Lea & Febiger [c. 1935]. 246 pages. 8vo. Cloth, \$3.50.

This book is of distinct value as a handy desk reference of food and beverage analysis in prescribing diets. It fills the gap left by other books on the subject. It is a compilation of tables of food values which include the ordinary staples of diet as well as commercially packaged foods and their analysis. In keeping with the post-prohibition era, all beverages containing alcoholic contents are analyzed and listed. This is important in view of the fact that their use has become so general. As an added feature to the Carbohydrate, Protein and Fat data, the mineral content of all foods is given in detail. The section on Vitamins though employing the symbol method to designate vitamin content, is well prepared. The reading matter is concise and very explanatory, and assists in a further understanding of the subject.

This book will undoubtedly replace Bulletin 28 of the Dept. of Agriculture as a source of food analysis.

MORRIS ANT.

The Salmon Memorial Lectures

DESTINY AND DISEASE IN MENTAL DISORDERS. By C. Mache Campbell. New York, W. W. Norton & Company, Inc., [c. 1935]. 207 pages. 8vo. Cloth, \$2.00.

The above entitled work embodies three lectures given by Dr. Campbell in the "Thomas W. Salmon Memorial Lectures." The first one deals principally with present-day trends in psychiatry and may be epitomized by a quotation from the "Foreword." "For insight into human personality and its disorders, we must not look too exclusively to our humble fellows in the animal kingdom. We must study man himself; . . . man is a refractory object for the study of personality owing to his complicated inhibitions and conventions; . . . Thus the traditional body of psychological doctrine suffers from many gaps; . . . These gaps in our knowledge are largely the result of confining one's studies to the normal man, for the normality of the individual consists of social adaptation sufficiently conventional to conceal from his fellows the workings of the deeper forces within his nature. The nature of these deep-

er forces can only be revealed when the conventional veil is torn aside. Thus the most valuable insight into the deeper forces of human nature is offered by nervous and mental patients." The second lecture is made up chiefly of case reports of various types of schizophrenia. The third lecture is utilized for a discussion of general principles and some of the particular symptoms of schizophrenia. The work is a valuable contribution to the literature of this subject.

F. C. EASTMAN.

And Very Well Worthwhile

OBSERVATIONS OF A GENERAL PRACTITIONER. By William N. Macartney, M.D. Ft. Covington, New York, Macartney's Book Store [c. 1932]. 478 pages. 8vo. Cloth, \$3.00.

Those of us who have been inured to regard the country practitioner as out of reach of medical progress, and to look upon the medical center as the ideal setting for the physician, will have a shocking surprise in store for them on reading this splendid book by Dr. Macartney—a general practitioner from northern New York State. His fifty years in practice have not deadened his zeal for medical progress; and, unlike some of his younger confreres who have learned to associate new methods with progress, often regardless of merit, he has been gifted with a professional perspective, molded partly by years of practice, by a flexible approach, and by a critical common sense.

In this book the author discusses, in separate chapters, almost every conceivable type of common malady from Eyestrain to Empyema with the same fluency as if they represented one specialty, so that representative specialists will no doubt respect the author's breadth of practical and theoretical knowledge. These different ailments have been written, not in routine textbook fashion, but quite informally, as if they were based on his professional experiences. With certain of the statements, some readers will no doubt differ; but their recommendations may not be more tenable than those of the author, who has aimed to be direct and to the point.

If the general practitioner has been the forgotten man in medicine, Doctor MacArtney has unearthed him and placed him on a high pedestal by relating in matter of fact fashion the vast field for clinical research in store for him.

EMANUEL KRIMSKY.

THE PRACTICAL MEDICINE YEAR BOOK, 1934

THE PRACTICAL MEDICINE YEAR BOOK. Progress in Medicine and Surgery. Publishers, 1934.

Comprising Nine Volumes on the Year's Series, 1934. Chicago, The Year Book

THE 1934 YEAR BOOK OF GENERAL MEDICINE. Edited by George F. Dick, M. D. et al. 843 pages, illustrated. 12 mo. Cloth, \$3.00.

This year book each year becomes more valuable as a reference volume of the advances made in the medical field. The editors of each section; infectious diseases, diseases of the chest, diseases of the blood and blood forming organs, the kidney, diseases of the heart and blood vessels and diseases of the digestive system and of metabolism, have retained and incorporated in this volume the advances of value in medicine. So comprehensive is this volume that special mention cannot be made of each subject. The value of these books have been recognized in the increased demand for them each year.

H. M. MOSES.

THE 1934 YEAR BOOK OF GENERAL SURGERY. Edited by Evarts A. Graham, M. D. 815 pages, illustrated. 12 mo. Cloth, \$3.00.

This is an annual review of surgical literature, brought up to date and edited with intelligence and judgment. As in previous issues, under the same editorship, there are occasional, though too infrequent, comments, suggestions and criticisms by the editor, of some of the articles reviewed.

Dr. Graham has prepared us for a rather generous consideration of Thoracic Surgery, by referring, in his introduction, to the ever-increasing volume of literature on this subject. Of course, sufficient latitude must be conceded to Dr. Graham in the review of literature on

Thoracic Surgery. He has, however, been equally generous in allotting space to Anesthesia and Analgesia.

The injection treatment of Varicose Veins and Hemorrhoids has evidently not brought out any conspicuous contributions, and no index reference to the injection treatment of Hernia.

The mass of current surgical literature must be well nigh overwhelming, and the editor of the Year Book of General Surgery has tried to focus on such articles as show conclusions, express new ideas or promise potential advances in knowledge.

J. RAPHAEL.

THE 1934 YEAR BOOK OF THE EYE, EAR, NOSE AND THROAT. Eye edited by E. V. L. Brown, M. D., and Louis Bothman, M. D.; Ear, Nose and Throat edited by George E. Shambaugh, M. D., and Elmer W. Hagens, M. D. 621 pages, illustrated. 12 mo. Cloth, \$2.50.

For the specialist there is so much of importance in a reference book of this type that a review is obviously impossible. For the general practitioner, however, there are certain features which may prove indispensable. For example:

1. Supposedly normal, uninfected conjunctiva is bacteriologically growth-bearing.
2. Hypertension, per se, exerts little or no change in the retinal vessels; but such changes are due to a sclerosis entirely independent of blood pressure variations.
3. Deep excavation of the optic disc may be a sign, not of glaucoma but of entirely unrelated conditions.

4. "Dead White" optic nerve heads may be compatible with normal central visual acuity.
5. Cataract extraction may be safely performed in a hemophiliac.
6. Relaxed and redundant skin of the upper eyelids may be corrected by a simple operation.
7. The relations between dental and ocular infections is still obscure.
8. Sectioning of the vestibular half of the eighth nerve seems promising in Meniere's disease.
9. Protruding ears may be rectified by a simple operative procedure.
10. The indications for mastoid operation are not infrequently based on flimsy evidence.
11. According to editorial comment—"most cases of petrositis recover spontaneously after simple mastoidectomy."

EMANUEL KRIMSKY.

THE 1934 YEAR BOOK ON PEDIATRICS. Edited by Isaac A. Abt, M. D. Second edition. 541 pages, illustrated. 12 mo. Cloth, \$2.25.

This present volume on pediatrics maintains the reputation established by the editors in the previous issues of this annual publication.

The growing size of the book, is an indication of the increasing numbers of articles in the various journals throughout the world, from which the editors must select their material. In the reviewer's opinion the tremendous task involved has been admirably done, and the book contains an excellent cross section of the 1934 pediatric literature of the world.

There is so much interesting material in the book that it is difficult to mention any particular phase covered, but of special importance are the articles on the newborn infant.

The book is attractively bound and printed in the most legible and pleasing way.

JOSEPH C. REGAN.

THE 1934 YEAR BOOK OF GENERAL THERAPEUTICS. Edited by Bernard Fantus, M. D. Second edition. 462 pages, illustrated. 12 mo. Cloth, \$2.25.

This practical book is a second edition consisting of therapeutically useful facts and procedures dug out of and abstracted from the medical literature of the year designated by the title. The fact that this is a second edition is proof of its value. The editor needs no introduction.

Four hundred and seventy-five authors are represented in this work. The contents include: General Therapeutic Technic, Antiphagogens, Tissue Alterants, Restoratives, Function Modifiers, Toxicology, and Non-pharmacal Therapy. As can be seen, a variety of subjects is presented, making at least parts of the book of practical interest to all practitioners.

A. W. MARTIN MARINO.

THE 1934 YEAR BOOK OF DERMATOLOGY AND SYPHILLOLOGY. Edited by Fred Wise, M. D., and Marion B. Sulzberger, M. D. 704 pages, illustrated. 12 mo. Cloth, \$3.00.

This issue of the Year Book is probably the finest that has been published. The editors have written an introductory chapter, "Modern Treatment of Early (Acquired) Syphilis," for the general practitioner. Its many warnings, and its outline of suggested treatment are timely, and to the point. The arrangement of groupings of the various dermatoses is quite convenient for a book of this character. Therapy, Physical Therapy, Experimental and Investigative Studies, as well as Syphilis and its Therapy, all have separate chapters.

The literature reviewed has been well chosen, and the articles themselves have been well written, so that one finds it easy, and fascinating, reading.

E. ALMORE GAUVAIN.

THE 1934 YEAR BOOK OF UROLOGY. Edited by John H. Cunningham, M. D. 461 pages, illustrated. 12 mo. Cloth, \$2.25.

In this little book of some four hundred and fifty pages the reader has the advantage of a complete and concise review of the literature in Urology for the past year, selected and discussed by an outstanding and experienced leader in the field. The forepart of the work is devoted to general considerations, opening with

the presentation of eleven fundamental principles of Urology laid down by Professor G. Marion. The rest of the work is included in sequence, grouped by regions, beginning with the kidney and ending with the genitalia. Numerous illustrations also appear throughout. Papers quoted are indexed at the foot of each page.

The author discusses the high standard of work done in the advancement of Urological knowledge, and recognizes, also, that many of the contributions have come from younger men in the profession. The plethora of material and multiplicity of subjects does not permit of discussion in the space of this limited review. To anyone interested in urological diagnosis or treatment, or even for up-to-date general information on the subject, the book is invaluable. In fact, the urologist himself, ever a close student of the literature, will find the book a distinct advantage in supplying papers and subjects, which had not come to his attention even after careful reading of the current journals.

AUGUSTUS HARRIS.

THE 1934 YEAR BOOK OF NEUROLOGY, PSYCHIATRY AND ENDOCRINOLOGY. Neurology edited by Hans H. Reese, M. D.; Psychiatry edited by Harry A. Paskind, M. D.; and Endocrinology edited by Elmer L. Severinghaus, M. D. 782 pages, illustrated. 12 mo. Cloth, \$3.00.

The 1934 edition of the year book is enriched by the addition of a section on endocrinology. As usual there are abstracted articles on neurology and psychiatry.

Some of the more interesting articles are concerned with the diagnosis and treatment of tumors of the cerebrum, one by O. Foerster being especially good for a review of methods of diagnosis. There are articles on intracranial hydrodynamics, a review of the epidemic of encephalitis in St. Louis, and the experimental work of Brodie in demonstrating the pathway of the poliomyelitis virus.

The section on endocrinology has a modern classification and tables of the hormones produced by the various glands, together with a full discussion.

STANLEY S. LAMM.

THE 1934 YEAR BOOK OF RADIOLOGY. Diagnosis edited by Charles A. Waters, M. D., and Therapeutics edited by Ira I. Kaplan, M. D. 512 pages, illustrated. 8 vo. Cloth, \$4.50.

This is another of the series of year books with which the medical public has become so well acquainted. The 1934 Year Book on Radiology has continued with Dr. Charles A. Waters, of Baltimore, as editor of the diagnostic phase, and Dr. Ira I. Kaplan as editor of the therapeutic side.

As in the previous volumes the literature has been carefully reviewed and the articles presented represent the newer developments or reaffirmation of older points of particular interest.

In spite of the fact that Dr. Waters, in his introduction, states: "Radiologic literature, during the past year, has been lacking in original and enlightening contributions," three hundred pages of the book are devoted to the diagnostic side of radiology. As heretofore, the topics are well selected and the editorial comment most opportune. The same high grade of paper and illustrations have been provided, but it is a pity that, with such fine presswork, errors should have crept in in the placing of the illustrations.

Dr. Kaplan's portion of the work, taking up nearly two hundred pages, is a splendid review of the present-day views on X-ray therapy. His introduction, especially on the cancer situation, is most pleasing. It is to be noted that the articles which Dr. Kaplan has selected and upon which he has made comment are most helpful. He has avoided controversial subjects and has made a most delightful presentation of the present views and modern advances in X-ray therapy.

This Year Book on Radiology again is most valuable as a work of reference for both the radiologist and the physician.

CHARLES EASTMOND.

What, Indeed?

A scientist thinks he is on the verge of perfecting a drug which will cure insanity. If he is successful what will we do for wars?

Detroit News.